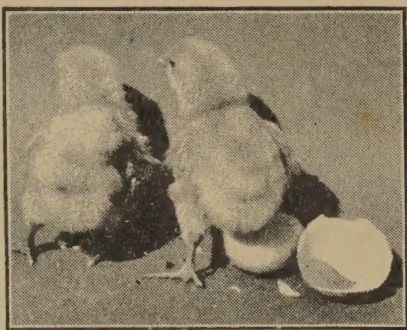




Conkey's POULTRY BOOK



How Vitamins Pay

THAT vitamins A, B and D are a very great factor in the life, growth and health of poultry from chick to mature producing bird is no longer doubted. They are as necessary as are correct amounts of protein, carbohydrates and fat.

VITAMINS A and B are found in feeds, but their presence in sufficient quantities to accomplish results demanded of the modern flock is by no means assured. It is often just the lack of these vitamins that causes failure. The big problem of the poultryman therefore is to obtain these vitamins in a concentrated form, and a form that *holds* the vitamin potency over a sufficient period of time for practical needs.

VITAMINS A and D are present in very large quantities in high-test cod liver oil, and vitamin B is very potent in brewers' yeast.

THESE two products—cod liver oil and brewers' yeast—furnish the greatest known source of A, D and B vitamin supply. But since the cod liver oil when exposed to air allows the A vitamins to oxidize and rapidly escape and the D vitamins to weaken and finally lose their potency, the question is, how to overcome this trouble?

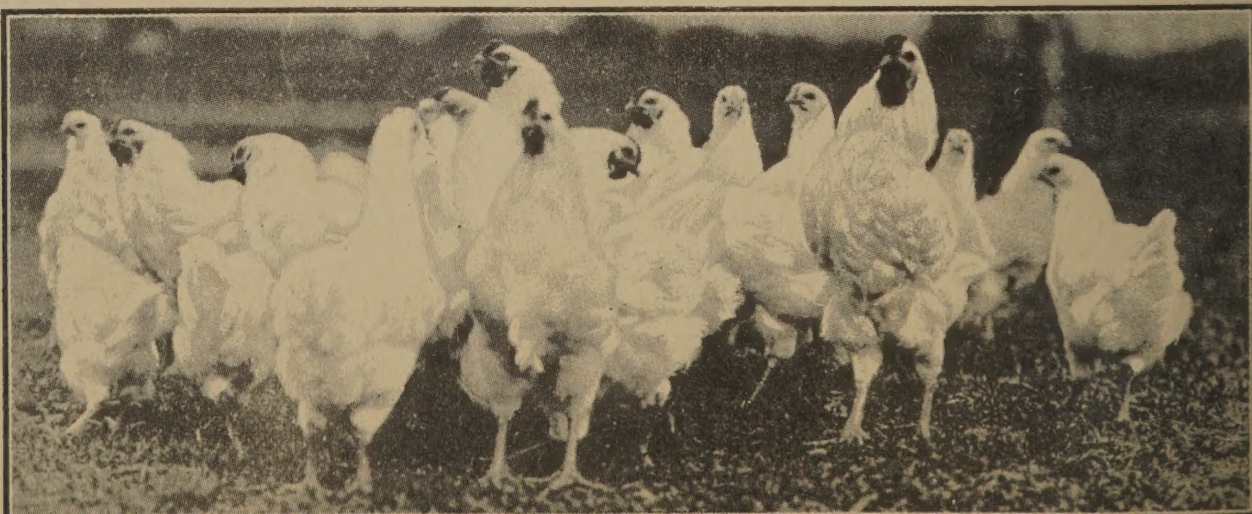
CONKEY'S Y-O (Y for yeast and O for oil) solves this problem. It is a smooth

brown powder in which Marmite yeast and cod liver oil are combined by a special process whereby the oil is sealed on the yeast. This retains the potency of the vitamins and keeps them effective for a long time. So, when you add Y-O to your mash you have absolute assurance of an abundant supply of vitamins A, B and D at all times.

MARMITE yeast—the kind that is used in Conkey's Y-O—is obtained from brewers' grains and should not be confused with bakers' yeast. The vitamin B potency of Marmite yeast is far more virile than that found in the raw bakers' yeast, hence experimental work done with bakers' yeast has no bearing whatever on Marmite yeast; the latter is now recognized for its lasting potency of vitamin B.

THE value of cod liver oil does not lie in its quantity, but in the potency of vitamins A and D which it contains. Only the highest-testing cod liver oil is used in Conkey's Y-O, and the finished product (Y-O) is again tested for vitamins A, B and D potency to check our absolute guarantee that Y-O is the most potent and lasting carrier of vitamins A, B and D your money can buy.

For further information see Vitamins, in General Index.



Conkey's POULTRY BOOK

A HANDY BOOK *of* REFERENCE
on POULTRY RAISING



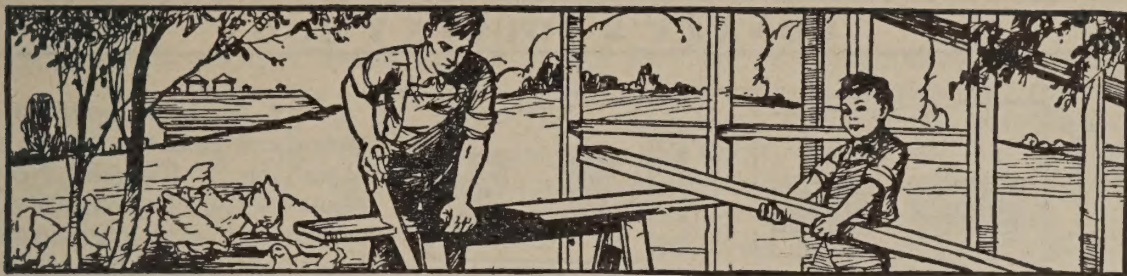
This familiar figure, smiling and confident, symbolizes the faith of Conkey customers won through more than a quarter of a century of fair dealing and the manufacture of honest products.

Published by

THE G. E. CONKEY COMPANY
CLEVELAND, OHIO, U. S. A.

GENERAL INDEX

	Page		Page
Advice Free.....	60	House, Brooder.....	28-29
Anatomical Chart.....	48	House, Construction.....	3-30
Air Blister.....	52	House, Laying.....	3-11, 32
Aspergillosis.....	54	Houses, Types of.....	5
Bacillary White Diarhea.....	55	Laying Mash, How to Feed.....	34
Bagging Down.....	52	Leg Weakness (Rickets).....	23, 25, 26, 36, 57
Blackhead.....	50	Limberneck.....	51
Blue Bug.....	59	Liver, Diseases of.....	51
Breeds and Breeding.....	12-16	Lice, Body.....	58
Bronchitis.....	49	Lice, Feather.....	58
Brooding Chicks.....	21-25	Lice, Head.....	58
Brooder House Plan.....	28-29	Lights for Layers.....	37
Broody Coop.....	7, 10, 21	Location, Poultry House.....	4
Bumble Foot.....	52	Manson's Eye Worm.....	49
Cannibalism.....	57	Minerals and Vitamins.....	25, 28, 36
Canker.....	48, 49	Mites, Red.....	58
Canker of Vent.....	53	Molting.....	47-46
Capon Raising.....	41	Mould.....	54
Catarrh.....	47, 49	Nests.....	10
Chicken Pox.....	52	Oats, How to Sprout.....	36
Chicks, Feeding of.....	21-26	Oil Gland, Inflammation of.....	54
Chick Diseases.....	56-58	Oviduct, Prolapsus of.....	54
Cholera.....	50	Owl Ticks.....	60
Coccidiosis.....	56	Parasites, How to Control.....	58-59
Cod Liver Oil.....	25, 62-63	Pigeons.....	41
Constipation.....	55	Pigeon Pox.....	52
Cornell Table.....	31	Pip.....	49
Crop Bound.....	50	Poisoning.....	51
Culling.....	42-46	Poultry Diseases, How to Treat.....	47-64
Diagram of Fowls.....	17, 42, 48	Prices, Conkey Remedies.....	61-64
Dogs.....	63	Rabbits.....	64
Ducks.....	41	Red Bugs.....	58
Egg, Analysis of.....	42	Rheumatism.....	53
Egg Bound.....	54	Rickets.....	23, 25, 26, 36, 57, 64
Egg Eating.....	54	Roosts.....	9
Eggs, Bloody.....	55	Roup.....	47
Eggs for Hatching.....	18-19	Sanitation.....	60
Eggs, Freak.....	55	Scaly Leg.....	58
Eggs, How Long to Hatch.....	20	Setting Hens, Care of.....	20
Eggs, How to Preserve.....	41	Sorehead.....	52
Eggs, Odorous.....	55	Sour Crop.....	50
Eggs, Production of.....	32-40, 62	Starting Feed, How to Feed.....	22-24
Eggs, Soft-Shell.....	55	Stick Tights.....	58
Exhibiting, Preparing for.....	41	Sunlight, Need of.....	5, 25
Favus.....	53-54	Ticks, Poultry.....	58
Feather Eating.....	54	Toe Picking.....	57
Feeding Schedules.....	38-39	Tonic Feeding Schedules.....	38
Fleas, Hen.....	58	Trapnests.....	10
Foot Abscess.....	52	Tuberculosis.....	50
Foxes.....	63	Turkeys.....	41
Frosted Comb.....	54	Vent Gleet.....	52
Gapes.....	56	Ventilation, Poultry House.....	9
Gastritis.....	51	Vitamins.....	22-24, 25, 26, 31, 36, 39, 62-63
Geese.....	41	Warts.....	52
Going Light.....	50	White Comb.....	53-54
Gout.....	53	White Diarrhea.....	55
Green Stuff.....	57	Wind Puff.....	52
Growing Mash, How to Feed.....	31	Worms, Round.....	59
Hatching Time.....	19-20	Worms, Tape.....	59
Hatching with Hens.....	19	Yeast and Cod Liver Oil.....	22, 26, 36, 39, 63
Hatching with Incubators.....	19	See also inside covers.	
Head Lice.....	21, 58		
Hen Fleas.....	58		
Hoppers, for Dry Mash.....	10, 11		



Conkeys

POULTRY BOOK

24th Revised Edition

POULTRY HOUSES AND EQUIPMENT

IN SUCCESSFUL poultry raising your houses and equipment play a very important part. They need not be elaborate and expensive but they must, if the owner hopes to gain the greatest and most lasting profit, follow certain fundamental principles as to light, ventilation, economy of construction, convenience, etc.

The aim of the poultry raiser should be to examine every suggestion in the critical light of, "How much time will this or that article save? Is it the very best that is known? Will it do the work?" and finally, "Is its cost reasonable in view of the probable profit it will return?" Often a piece of equipment which at first seems expensive, when put to use demonstrates its value immediately through the saving it makes of time, feed or labor and thus actually adds to the net profit. The poultry business is made up largely of details, hence the need of extra careful management.

Providing a good laying house for your flock is the first important undertaking. Plans should be studied from every possible angle, for the house will be the home of your birds throughout the entire year. Most hens will lay well during the Spring, but the laying house has much to do with their production the other seven to nine months of the year.

Economy at all times should be the watchword of the poultryman but don't be penny-wise and pound-foolish. Sometimes there is a building on the premises that can be remodeled into a very practical poultry house. Again, secondhand lumber is often available and is well adapted for buildings of this type. The more economical the building—within the bounds of reason and common-sense—the more money the beginner will have to spend for equipment and better breeding stock. Money invested in the latter will bring a larger and quicker return than any other poultry investment. In all phases of the poultry business, therefore, you should be bold but not reckless; cautious but not fearful. Use good common-sense, stick to the game, read, think, strive to improve the birds, be ever alert to reduce labor cost and improve the management. Judge every expense by what it will do for you in the long run. Remember that poultry raising is a business. With industry and good judgment results are bound to be good.

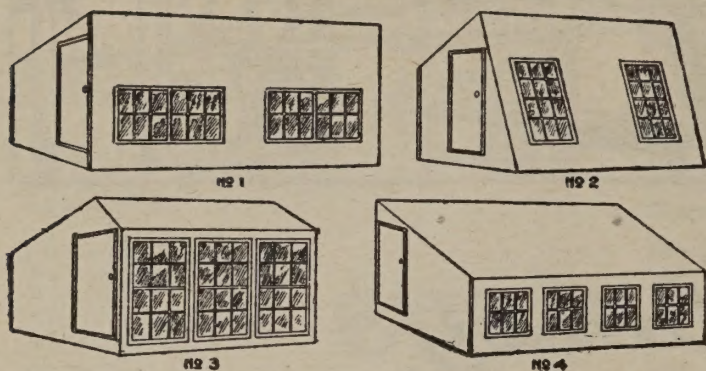


Figure No. 1—Avoid these Types

Let us look now to the details of poultry house construction. Figure No. 1 shows some of the more common types of faulty construction. No. 1 has windows too low but this could be remedied by leaving open spaces above the windows for better ventilation and sun radiation. The front of No. 2 is not perpendicular and will always be an annoyance. No. 2 also should have ventilators. In No. 3 the

glass surface is too great—it will be too warm in summer and too cold in winter. This could be remedied by having about one-third as much glass and the rest open space covered with wire and muslin curtains. Figure No. 4 has insufficient ventilation and sun radiation. The slope of the roof makes it unbearably warm in summer; and the high north wall, where roosts would be located, too cold in winter.

There are just two essential requirements of a poultry house, comfort for the hens and convenience for the attendant. It should be economical to build, dry, light, well ventilated, warm in winter, cool in summer, and easy to clean and keep sanitary.

Of course suitability to climate must always be kept in mind. However, after reading this chapter and studying the drawings you should understand the principles governing housing sufficiently to adapt any design to your climate and particular needs, or to alter an old building to make a satisfactory laying house.

SIZE TO BUILD—Do not over-crowd your birds. The greater the floor area the less space is required per bird—up to units of 100—as each individual has more space over which to exercise. It is best, too, to make the house square, up to 20'x20' size, and thereafter to add 20' units to each side.

For 10 birds or under, 10 sq. ft. per bird should be allowed. Up to 20 birds allow 8 sq. ft. per bird. For 30 birds allow 6 sq. ft. per bird. For 40 birds allow 5 sq. ft. per bird and for 100 birds allow 3 to 4 sq. ft. per bird.

The above applies particularly to the dual purpose varieties—that is the American breeds—(Plymouth Rocks, Wyandottes, Rhode Island Reds, etc.) If you plan raising one of the Mediterranean varieties—(Leghorns, Anconas, etc.) three-fourths as much space per bird will be sufficient.

LOCATION—Having decided on the proper size house for the flock the next step is to select the ideal site for the comfort and health of the birds and also its location in relation to other buildings. If possible, place it nearer the dwelling than are other buildings, as this is a big factor in saving labor. Barns, granaries, etc., should not be close enough to shade the poultry house nor encroach on the yard space.

It is hardly necessary to state that the site of the house should be on well drained soil. Dryness and sunlight are absolutely essential. A southern slope is ideal. If the drainage is poor where you must build, put down several loads of small stones and tamp in loam or clay over all. Slope on the outside away from the bottom of the building to turn the surface water away. This is particularly necessary if you plan to have a dirt floor.

Sunlight is another necessity for health and heavy egg production. Always have the building face south, and since more sun will reach the interior of the house from the south, most of the windows and openings should be placed in the south wall of the building also.

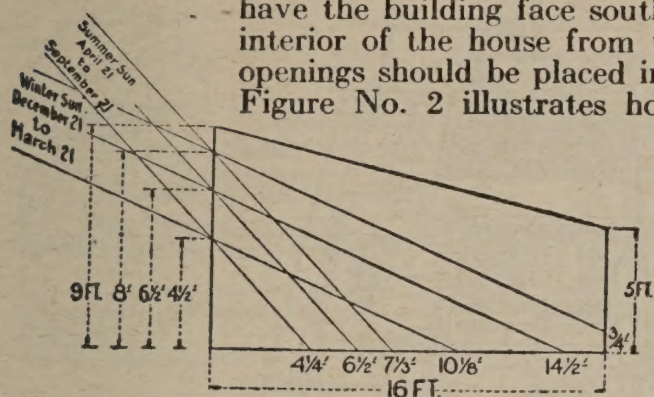


Figure No. 2—Sun Radiation Chart

Figure No. 2 illustrates how the sun's rays penetrate poultry houses at different seasons. Note the lines showing the extreme distance the sun reaches from top of windows or openings at $4\frac{1}{2}'$, $6\frac{1}{2}'$, $8'$ and $9'$ from the floor.

TYPES OF POULTRY HOUSES

—Though there are many different styles of poultry houses the majority fall under two great types, i. e., the Shed Roof Type and the Half-Monitor Type. Probably the

Shed Roof Type house is most common of all, and when properly built it is at once both attractive and practical and moreover economical to construct.

The drawings shown here are based on ideas gained from many sources. We are indebted to the Agricultural Colleges and Stations throughout the United States and to poultry journals as well as suggestions from practical poultrymen, besides our own poultry experts. It has been our aim to search out, to gather together from all sources and then in turn to give as much definite information as is possible in the space available.

THE SHED ROOF TYPE POULTRY HOUSE—Aside from economy of construction the Shed Roof Type poultry house offers wonderful possibilities for thorough and adequate ventilation. It can be kept very warm and dry in the winter, and yet cool and comfortable in the summer. The house is made to allow thorough ventilation by the open front and at the same time gives a warm roosting closet at the back of the house, free from drafts.

The Conkey Laying House Plan is described in the following pages and embraces many practical ideas. Study the pictures and send for blue print (10 cents) if you want to build one along these lines.

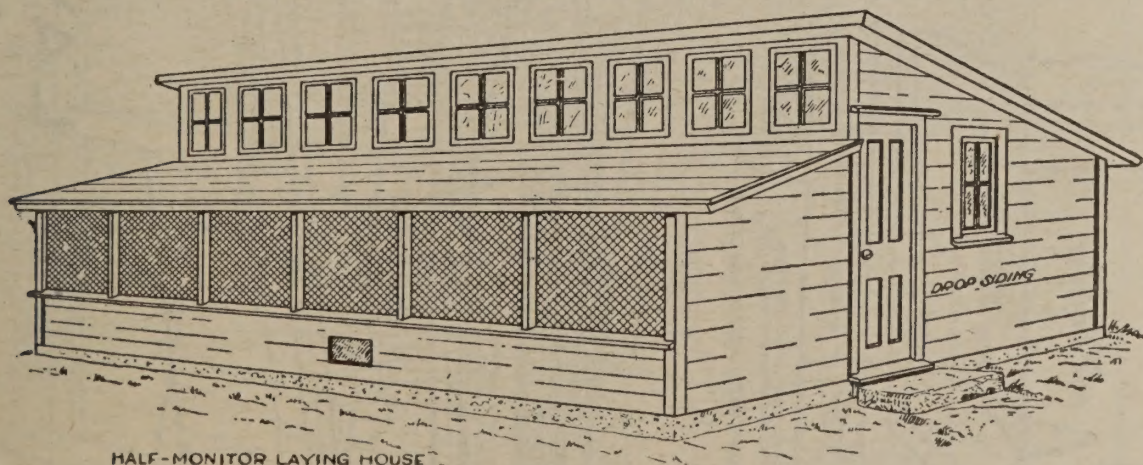
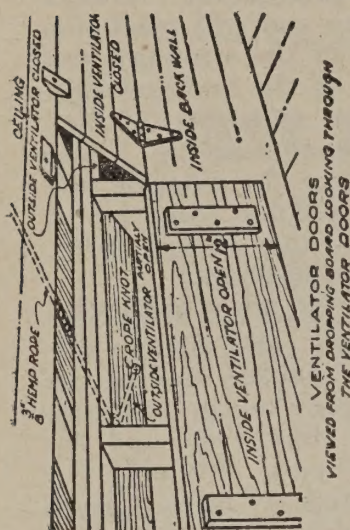


Figure No. 3—Half Monitor Type Poultry House

Space does not allow our giving details of construction of the Half-Monitor Laying House; but you can secure a large blue print by writing The G. E. Conkey Company and enclosing 30c in stamps.



CONKEY'S LAYING HOUSE PLAN

See Pages 6 and 7

MATERIAL NEEDED

Foundation

30 sacks cement; 5 rolls 1 ply tar paper; 8 anchor bolts $\frac{1}{2}$ "x8"; stone and sand.

Lumber

8 Pieces 4"x4"x10' (Sills—can use 16 pieces 2"x4"x10' if desired)
 50 Pieces 2"x4"x10' (Framing and roost; nests and dropping board supports)
 20 Pieces 2"x4"x12' (Rafters)
 2 Pieces 2"x8"x10' (Center beam)
 18 Pieces 1"x2"x10' Dressed Lbr. (Broody coops and curtain frames)
 14 Pieces 1"x4"x10' Dressed Lbr. (Finishing roof and top front windows)
 12 Pieces 1"x8"x10' Dressed Lbr. (Nests)
 3 Pieces 1"x6"x10' Dressed Lbr. (Nests) (Simple partition nests)
 5 Pieces 2"x4"x12' Dressed Lbr. (Roost frames)
 5 Pieces 2"x2"x10' Dressed Lbr. (Roosts)
 800 ft. B. M. Shiplap (Siding, etc.)
 700 ft. B. M. Rough Lumber (Roofing and droppings board)
 2 Curtain holders—See Brooder House Plan.

Hardware

Nails: 5 lbs. 4d; 40 lbs. 8d; 20 lbs. 10d; 20 lbs. 20d; 3 lbs. small staples.
Wire: 250 sq. ft. 2" mesh poultry netting, preferably 5' width.
Windows: 2 sash 24"x24" for back; 4 sash 24"x30" for front. Galvanized iron for window arrestors—See Brooder House Plan.
Roof: 6 rolls 3 ply roofing. (Also 5 rolls 1 ply tar paper mentioned under foundation).
Hinges: 18 Pr. 3" strap hinges for windows, ventilators, etc. 1 Pr. 6" strap hinges for door. 6 Pr. 1" steel butts for broody coop doors and hopper covers. 4—8" hasps and 4— $\frac{3}{8}$ "x5" bolts for roosts. 3 Pr. hooks and eyes for roosts and door. 8 anchor bolts $\frac{1}{2}$ "x8"—mentioned under foundation.
Pulleys: 4 single and 1 double pulley for ventilators.
Rope: 50'— $\frac{3}{8}$ " hemp rope for ventilators.
Miscellaneous: 40 sq. ft. canvas.

Suggestions

Foundation: Set anchor bolts heads down, $3\frac{1}{2}$ " in foundation.
Floor: Level the ground, tamp down firm, then spread 1 sheet of tar paper down at a time and cover with cement. Use roof paint to seal tar paper joints and make a 3" lap.
Ventilators: Be sure to hinge the top front ventilators before nailing sheeting on the front eaves or great difficulty will result later in putting on the hinges. If you plan to build, send 10c in stamps and get a large print 14"x24" of this Laying House. You will find it a great help.

VENTILATION—A bird for its size consumes more oxygen than any other living creature. Having no sweat glands it “perspires” through its breath. With the fowl’s temperature at 106° , the breath coming into cool air condenses quickly. Constant flushing of the air, therefore, is necessary to carry out this moisture or in cold weather a frost forms on the inside walls, then thaws out during the day, making the house damp. A dry cold does less damage to fowls than a moisture-laden, freezing temperature.

IN COLD CLIMATES, where it is difficult to keep the drinking water from freezing, the open front should be enclosed with windows during the winter—(See Figure No. 4) and the whole house ceiled overhead, back, front and side walls. This will necessitate putting ventilators—3 feet in diameter—in the center of the roof every 20 feet instead of the style shown in this book. See Figure No. 4A-C.

It may also be advisable to use a brooder stove in the house to supplement heat made by the birds and thus keep the temperature in the building above freezing. If a galvanized iron jacket circles the stove, the heat will be more evenly distributed throughout the room. Raise the jacket

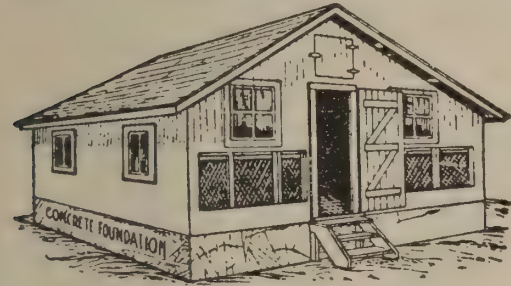


Figure No. 6—Missouri Farm Poultry House—A good type for cold climate

4 inches off the floor to allow circulation of air.

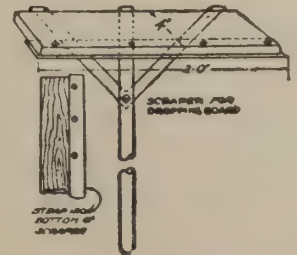
FLOORS for poultry houses are made of dirt, wood and concrete. Dirt floors are difficult to keep dry and smooth; wooden floors often become damp and warped, while concrete floors built the old way are expensive. Built the new way, cement floors are inexpensive, dry, sanitary and because they are right on ground that is always protected, they are warm in winter and cool in summer.

Simply smooth and tamp solid the dirt floor, then lay cheap tar paper over the surface and upon this paper spread cement about $1\frac{1}{2}$ inches deep. The tar paper stops earth moisture from contacting the cement and will last a life time. If the cement should crack no harm will result and the money saved by putting down this kind of a floor can be used to good advantage in making the building above more tight and comfortable.

DROPPINGS BOARD—The idea of the droppings board is two-fold. First, it catches the droppings and keeps them from contaminating the litter below, thus enabling the birds to utilize all available floor space. Second, it stops cold drafts from striking the birds from underneath. When building this droppings board, the boards should run from front to rear. This will help a great deal in cleaning.

ROOSTS—Building the roosts so that birds roost in rows from front to rear gives them better ventilation and this plan also facilitates amazingly the ease with which the droppings board can be cleaned. It saves time, and time to the poultryman is money. Screening the roosts prevents birds from picking up eggs or intestinal worms that have been passed in the droppings and, too, keeps their feet cleaner. This reduces the number of dirty eggs. Another value the screen has is that of keeping the birds from trampling and packing the droppings on the droppings board and this also helps to make cleaning a simple matter.

Hinging the roosts to the wall with a heavy hasp will enable you to knock out the wooden pin—see Figure No. 5-D—and move the roost out of the house should sickness necessitate an extra thorough cleaning. It also gives the cleaning scraper almost a clear sweep underneath the roosts, as only one leg is necessary at the back to hold the roosts up.



NESTS—These should be made in sections of 4 or 5 feet. They can be placed on the wall or under the droppings board. If you desire to make trap nests Fig. No. 8 shows how to make a simple but effective trap nest.



Figure No. 7
Wall Nests

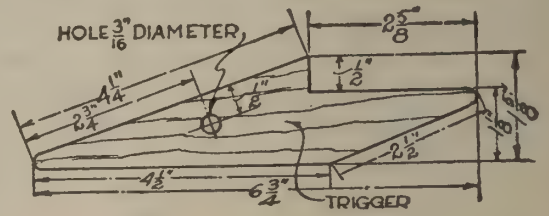


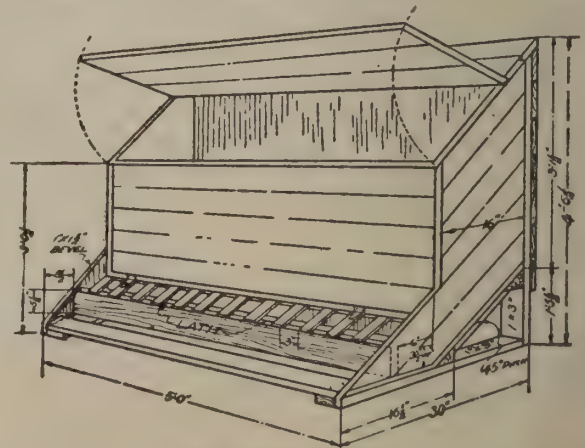
Figure No. 8
Connecticut Trap Nests

We strongly advise every poultry raiser to trap his birds for at least a few weeks prior to the breeding season. Trapping makes it easy to eliminate all birds that lay those small, irregular eggs and it also saves laborious selection of eggs during the hatching season. It has the further advantage of giving the poultryman an opportunity to examine each individual bird at the time he is examining her egg. Send for Conkey Trap Nest Record Blank for 50 to 100 birds. Sent free.

BROODY COOP—By all means build these in one corner of the roosting space. Have three of them the size shown in Figure No. 5. Note particularly the ease with which broody hens can be fed and watered. With a battery of broody coops like those shown in Figure No. 5 it is a simple matter to break up the broody hens at once.

DRINKING RECEPTACLES—

Many find a granite dishpan with a slatted frame guard the most practical, where running water is not available, because it is so easy to clean and the frame prevents the birds from contaminating the water. (See page 31). It is also very easy to fill. All drinking receptacles, as well as mash hoppers, should be placed 18 to 20 inches above the floor. Dirt and litter is kept out of the receptacles when they are raised above the floor and it also induces more exercise among the birds, allowing them to use every bit of floor space.



WALL-TYPE MASH HOPPER

Figure No. 9

MASH HOPPERS—The styles shown herein are practical and will NOT allow wasting of mash.

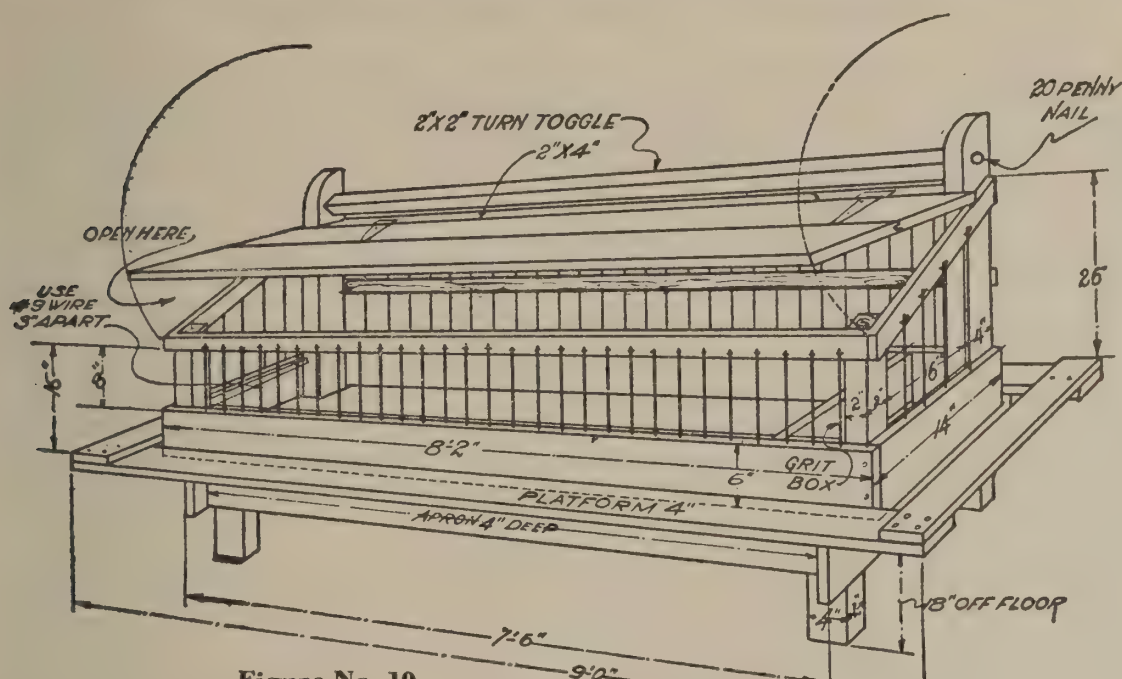


Figure No. 10

PLAN OF
Conkey's "ALLAROUND" MASH HOPPER & GRIT BOX

This mash hopper has repeatedly demonstrated its superiority over other styles in that it is nice in appearance, is easy to build, can be made of rough lumber if desired and affords more feeding space per square foot than any hopper yet designed. It will not waste mash and the mash never becomes contaminated. It is easy to fill, holds about 50 lbs. and the feeder can tell at a glance when the mash is getting low. It will accommodate about 125 birds.

MATERIAL NEEDED

Hopper

1 Piece	1"x12"x8'	(Bottom)
2 Pieces	1"x7"x8' 2"	(Sides)
2 Pieces	1"x7"x1'	(Ends)
3 Wide laths—split with saw.		
2 Pieces	2"x2"x17"	(Front posts)
2 Pieces	2"x4"x33"	(Back posts)
1 Piece	2"x4"x7' 8½"	(Top frame)
2 Pieces	1"x2"x10'	(Frame for wire)
1 Piece	1"x12"x8' 2"	(Cover)
1 Piece	2"x2"x7' 8½"	(Turn toggle)
85 ft. No. 9 wire—for wire stays		
Wire staples, and nails		

Bench

4 Pieces	2"x4"x18"	(Legs)
2 Pieces	1"x4"x7' 4"	(Aprons)
4 Pieces	1"x4"x25"	(Cross supports and end platforms)
2 Pieces	1"x4"x9'	(Side platforms)

NOTE—Set platform legs 14" apart, outside measure. Make holes for wire stays by driving spike half inch in top edge of hopper box. Staple wires at top. Tack lath (split lath) inside box at top edge. This keeps mash from being pecked out by the birds.

Blue print sent for 10c. We do not manufacture this mash hopper.

BREEDS AND BREEDING*

AMERICAN CLASS—There are more than a dozen classes of poultry and many varieties and sub-varieties listed under the classes, but in the United States the American and Mediterranean Classes are the most popular. The American Class is also sometimes called "The General Purpose Class." This is because the size and conformation of the birds makes them adaptable for either heavy egg production or for high quality meat. The varieties and sub-varieties in this class are given below, together with a few of the important points of each breed.

PLYMOUTH ROCKS—This breed has seven recognized varieties. They are: Barred, White, Buff, Silver-Penciled, Partridge, Columbian and Blue. The Barred variety is the pioneer and was first exhibited in 1869 at Worcester, Mass. Outside of color the seven varieties are identical. Their weight should be as follows: Cock $9\frac{1}{2}$ lbs.; cockerel 8 lbs.; hen $7\frac{1}{2}$ lbs.; and pullet 6 lbs. This weight is in accordance with other American Classes which places the whole group of American breeds between the Asiatic and Mediterranean varieties.

Rocks are found in practically every section of the country. They are hardy and adaptable to almost any climate; are wonderful layers of brown shelled eggs and are good table fowls. Generally speaking, they mature at 6 to 7 months.

WHITE WYANDOTTES—The eight varieties composing this group are: Silver-Laced, Golden-Laced, White, Buff, Black, Partridge, Silver-Penciled and Columbian.

Wyandottes are very popular and can be found almost anywhere in America. They are somewhat lighter than the Rocks. Their standard weight calls for 8 $\frac{1}{2}$ lbs. for the cocks; $7\frac{1}{2}$ lbs. for the cockerels; $6\frac{1}{2}$ lbs. for the hens and $5\frac{1}{2}$ lbs. for the pullets. Generally speaking, Wyandottes mature at about 6 months.

The shells of Wyandotte eggs are brown. Poultrymen wishing to raise fowls that are very compact, as well as good layers, will find the Wyandottes particularly fine.

RHODE ISLAND REDS—This breed has sprung into great prominence in the last twenty-five years. There are just two varieties—the Single Comb and the Rose Comb. Their weight should be $8\frac{1}{2}$ lbs. for the cocks; $7\frac{1}{2}$ lbs. for the cockerels; $6\frac{1}{2}$ lbs. for the hens and $5\frac{1}{2}$ lbs. for the pullets. They usually mature at $5\frac{1}{2}$ to $6\frac{1}{2}$ months.

Unlike the Rocks, which are heavier and more thickly set, or the Wyandottes which are shaped somewhat like a U the Reds are very long of body with top and underlines carried almost horizontal. Reds are found in practically every locality. They are heavy layers and good meat birds.

OTHER BREEDS that belong to the American Class are: Javas; both Black and Mottled; Dominique; Buckeye; Rhode Island Whites; Chantecler and Jersey Black Giants.

MEDITERRANEAN CLASS—This class has long been popular as the leading egg producing group. Breeds in the Mediterranean Class are smaller than either the Asiatic or American Classes and this fact makes them mature earlier and begin laying sooner.

**Limited space does not allow us to describe breeds of fowls. For those who want to know all about breeds, we suggest "The American Standard of Perfection," official publication of the American Poultry Association, which gives the weight, shape, markings and color of each standard breed as well as all other points of judging value. This book is the final authority on the subject. It will be sent postpaid upon receipt of \$2.50. Address your order to The G. E. Conkey Co., Cleveland, Ohio. So important is this subject that a whole book could be written and many things still left unsaid.*

LEGHORNS—are the most popular Mediterranean breed, especially the White Leghorn though many fanciers raise Brown (both light and dark plumage and Single and Rose comb) Buff, Black and Silver. In size Leghorns should weigh as follows: Cocks 5½ lbs.; Cockerels 4½ lbs.; Hens 4 lbs.; Pullets 3½ lbs.

The Leghorn is the typical egg producer and is the breed used on most of the big commercial poultry plants when birds are kept for eggs only. Discrimination against Leghorns and other Mediterranean breeds as meat birds is on account of the small size rather than quality of meat. As a rule the poultryman raising birds of the Mediterranean Class suffers a loss when marketing broilers and old stock, as compared to the poultryman raising birds of the American Class. To offset this loss the owners of Mediterranean breeds have birds that mature earlier, thus requiring less feed. They also are less troublesome about broodiness. As to production, taken as a class the Mediterranean varieties at the present time seem to outlay varieties of the American Class; however American breeds have repeatedly demonstrated laying ability equal to the Mediterranean breeds when the former are properly bred. It is largely a matter of markets, management and fancy as to which breed is best and this is a problem each individual must work out himself.

MINORCAS—Black (Single and Rose Comb), White, (Single and Rose Comb) and Buff.

Spanish—White Faced Black; Andalusian—Blue; Anconas (Single and Rose Comb) and Buttercups.

ASIATIC CLASS—In this class come the typical meat breeds—those that weigh from 7 lbs. for the pullets, to 11 lbs. for the cocks. The different breeds are: Brahmas, Light, Dark and Buff; Cochins—Buff, Partridge, White and Black; and Langshans—Black and White. These breeds are especially fine for capcizing.

ENGLISH CLASS—Of this class probably the Orpingtons—Buff, Black, White and Blue—are the most popular in America. Other varieties are Dorkings, Red Caps, Sussex and Cornish.

BREEDING FOR EGG PRODUCTION*

PROBABLY nine out of every ten persons who are to read this book will have heard the statement "Like produces like," as applied to livestock breeding, horticulture, floriculture, etc. As examples, it is widely known that in order to produce good corn or good potatoes, a good quality of seed must be used, and practically every housewife who has flower beds, or a vegetable garden, knows that good seed or the best individual plants should be used in order to get satisfactory results. The same general rule applies to poultry breeding, whether the object be size, shape, plumage color, feather pattern, or increased egg yield.

LIKE PRODUCES LIKE. But in applying this natural law of "like produces like," let it be realized that the bad or undesirable qualities reproduce themselves, as do the good or desirable qualities. The two-fold object of breeding, therefore, is to eliminate the undesirable qualities and to strengthen the attractive or profitable ones. In the cases of fruit-growing, flower improvement and truck gardening one can judge by the eye which are the best specimens to be reproduced, and this is true also of the exterior qualities of domestic fowl, but it is not true of certain inherited or transmissible qualities, such as exceptional ability to lay large numbers of eggs in a given time.

*Written by Grant M. Curtis, Editor "Reliable Poultry Journal," Author of "Production of 300-Eggers by Line Breeding," Etc. For complete Bulletin "Mating Domestic Fowl to Secure High Egg Production," (includes 4 Charts) by Mr. Curtis send for Conkey Bulletin No. 110.

VARIATION—Here another valuable natural law must be utilized, namely, that of Variation. The law of Variation works upward, toward a desired object or improved product, but it also works downward in the direction of inferior products. To make desired progress the fruit, flower or vegetable culturist must select the better specimens, showing variation upward toward higher values and seek to eliminate, season after season, those specimens that show variation downward or backward. And the same is true of the intelligent poultry breeder or systematic poultry culturist, precisely.

It is well known that egg yield or fecundity on the part of domestic fowl varies greatly, comparing one pullet or hen with another of the same breed, variety, strain and flock, notably so if they have not been specially bred for high productiveness. The question then is: How to find out which hens are the better layers, so that they can be used for breeding purposes, rather than to hatch eggs from poor layers or the kind of layers that just about manage to pay "their board and keep," but do not earn profits for the owners. In brief, how can the poultry keeper or poultry breeder make sure "which hen laid the egg," so he can be sure of hatching chicks from only the best layer or from the known-to-be really good layers?

SELECTION—The low-cost way to do this, and be certain about it, is to use trapnests. By this practice each layer wears a leg-band that carries her own number and before she is released from a trapnest in which she has laid, the number of her leg-band is marked on the egg-shell, or a notation made on the trapnest sheet, thus giving each hen credit for every egg laid by her. A record is kept of her monthly or yearly egg yield, thereby making plain to the owner or caretaker which hen is laying the largest number of eggs in a given time, also which hen is the poorest layer, etc.—and here he can find his safe guide for selecting the superior layers from which to hatch chicks to enlarge his flock or replace the poorer layers as time goes on.

The chances are many to one that when trapnests are installed, for the use of fifty to one hundred believed-to-be fairly good layers, and are operated 365 consecutive days (one year), it will be found that a dozen or more of the birds so treated will each lay anywhere from seventy-five to one hundred more eggs than the poorest two or three dozen layers in the flock. Such being the case, if "like produces like" then surely eggs should not be set from these poor layers, but from the better layers, especially from the dozen or so best layers, provided these layers of the most eggs are found to produce eggs of good size or weight, also of good shell color and texture, meaning eggs of the kind that bring top prices on the daily market.

LOCATE THE "OUTSTANDING BIRD"—Quite as a rule the modern successful breeder for high egg production, in building up a flock or strain, is keenly on the lookout for the "outstanding bird," so to describe her; that is, a high record layer which possesses also in strong degree the ability to transmit this exceptional power of productiveness to her offspring. A remarkably good layer, as compared with her mates, may not have the inherent power to transmit her high egg-production ability to her daughters, though as a rule she does, if fortunately mated. Why this is true, is not yet known, but the fact exists. Often a moderately good layer, say one that produces 200 to 225 eggs, if a leghorn, will produce more high-egg-record pullets than a hen that herself laid quite a few more eggs. But, other things being equal, the better layers can be relied on to give daughters that will lay a considerably larger number of eggs in a given length of time than the poor layers.

To locate this outstanding bird, two things are necessary: First, accurate and continuous trapnesting; second, what has come to be known as progeny test. The trapnest can be relied on to find the best layer in the flock, but whether or not this best layer has the ability to transmit such power to her daughters is something that can be found out only by trapnesting the daughters, which is

what is meant in part by the progeny test, as applied to pullets and hens. In the case of males, the progeny test consists mainly in trapnesting daughters of certain males, then comparing the records. Another way of finding out the probable breeding value of a male, as to his prepotency for transmitting high egg production from his dam to his daughters, is to check up how well his sisters perform in the trapnests. If they do well, or extra well, that is a strong point in his favor, as a sought-for prepotent breeder.

MATING—Having located (by the help of trapnest) your best layer and ten or a dozen of the “next best,” as compared with the others of the flock that were trapnested during their first year of production, the question is: What to do in the matter of mating them as yearlings, or in their second laying season? As a general rule the best plan, when working within the flock, is to select what appears to be the best son of the highest-record layer, meaning by “best” in this case, the most active, vigorous cockerel that is also a good specimen of the breed or variety—that is, typical in shape, up to weight and free from disqualifications, per the requirements of the “American Standard of Perfection.” This cockerel that season should be mated with his mother (as the best layer of the flock), along with ten or twelve of her high-record-laying mates, as shown by trapnest record for the preceding year. If the sire of this best layer (and of perhaps two or three of her good-record mates) were known and was still in vigorous health, he would be the most promising male to use, but too often he either is unknown or will have been disposed of before the first year’s trap records of his daughters have been completed.

When the daughters of the above described mating come into lay, the trapnests will again do their part by telling the owner of the flock: First, how well the daughters of the best layers of the year before are performing—daughters of that best hen, sired by her son—and the trap at the same time will place in competition with these daughters those of the other hens which formed that first mating headed by the same sire. A few years ago, one of the most competent breeders and instructors in down-to-date poultry culture said: “The successful poultry breeder of the future will be a good bookkeeper.” The reader of this bulletin, who is to act on its advice, will now have some valuable records to study. By noting the egg yield of the daughters of his best layer of the year before and comparing it with the trapnest records of the daughters of other hens in his first trap-record mating—all having the same sire—he will begin to get an idea of the breeding value, not alone of this best layer, but of each of the other high record layers, as compared with her and with one another.

He is still looking for the truly “outstanding bird”; for the high record layer (proved by trapnest) which has the ability to transmit this power liberally to her daughters, if she is mated to the right male to enable her to do this. The question of which is the right male, is one that has to be decided by test, when working within the one flock, this test to be the actual laying ability of the daughters of individual hens as proved by trapnest records. The first big point in favor of a hen is her ability to lay more eggs in the trapnests than her mates, all conditions being equal. Having won this victory, the owner of such a hen should value her accordingly, subject to test later as a prepotent breeder. Next, because it is a fairly safe rule that “blood will tell,” the poultry breeder cannot do better, within his own flock, than to use a son of this best layer as the head of his first trap-record mating, provided he is a fine specimen as to size, health, vigor, type, etc.

CHECKING RESULTS—Having done as above advised, the poultryman should study carefully the results of this mating by noting the fertility of the eggs, their hatchability, also the growth and vigor of the chicks, and later he is to be governed largely by the trapnest work of the daughters, not alone of the best layer, but of every other female he used in his breeding pen. Here should be some very helpful facts. First, did this best layer, mated to her own

son, produce higher-record daughters than did one or more of the other hens in this mating? If so, then this hen may be the right one with which to start line breeding, as it is called. Her daughters, as sired by her son, will be three-fourths of her blood, which may be said to be a first step in line breeding, which form of breeding means, by popular definition, holding the blood in line, probably in this case the blood of the "best layer," as located in the first year of trapnesting, which bird, by the high record of her daughters sired by her son, is found actually to possess the power to transmit her own high egg productiveness to her female descendants, and perhaps to daughters of her son mated with other hens, also shown by the trapnest records already in hand.

An important point is that there may have been in that first trap-record mating a better transmitter of high egg production than the actual best layer, and the man who is studying his trapnest records the second season or thereafter, will need to be keenly on the watch for such a hen, as disclosed by the trapnest records of several of her daughters. This has been known to happen rather commonly, even though the best layer may have had an advantage in being mated the second season with her own son. In one instance—to give a striking example—a 212-egg layer proved to be by far the best transmitter in a well-known flock, even though that same season in the same pen, under the same treatment, several of her mates laid well in excess of 212 eggs in 365 days. Nevertheless, line breeding, or holding prepotent blood in line, is at present the basis of the most successful breeding methods in securing highest egg production, both by individuals and as annual flock averages: therefore it is the system here briefly explained and recommended.

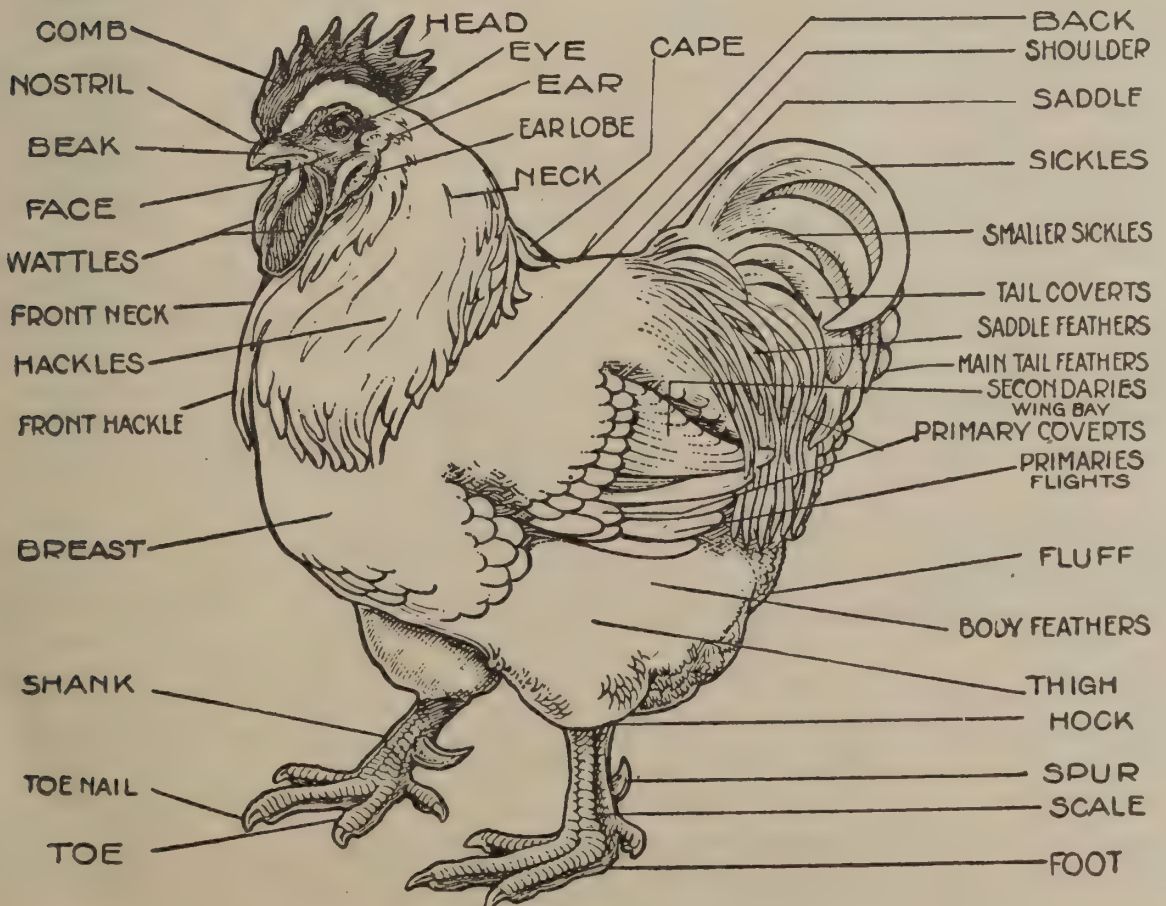
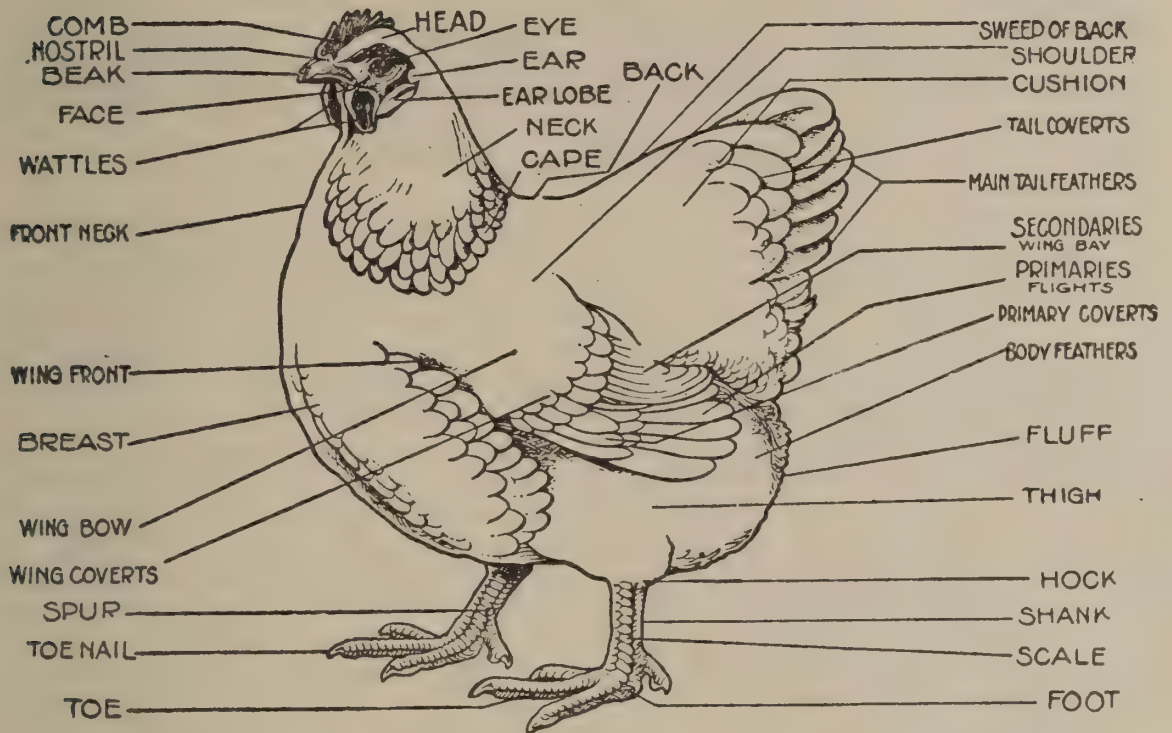
If you are interested in obtaining more information on this subject, write The G. E. Conkey Co., Cleveland, Ohio, for special bulletin by Grant M. Curtis, including charts on Mating for High Egg Production.



Trap Nest Record Blanks, on heavy sheets size 11x13¾, will be sent free to any poultryman who writes Conkey. State number of hens.

Owners of high record birds are urged to safeguard their vitality by using Conkey's Y-O in the feed to insure vitamins. Read pages 27-28, also front and back inside cover on "How Vitamins Pay" and be sure to write for special booklet on Conkey's Y-O describing what it is for and how to feed it to poultry at all ages. All show birds and all breeding stock should be conditioned by feeding Conkey's Gecco Egg Mash containing Y-O or by adding 2% of Y-O to the mash you are now feeding. There is a great deal of misinformation about vitamins for poultry. The latest scientific findings on the subject are yours for the asking. Address Consultation Department, The G. E. Conkey Company, Cleveland, O.

DIAGRAM OF FOWLS





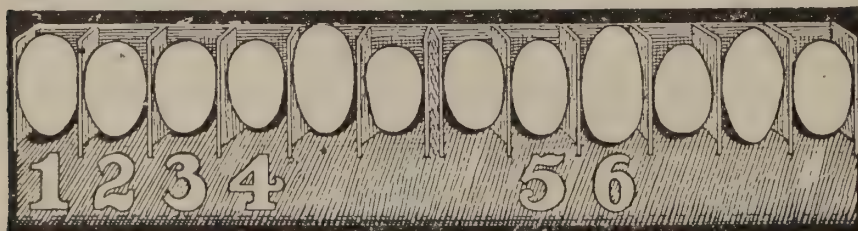
HATCHING TIME

THE proper date for hatching chicks depends on local climatic conditions and the breed, but to insure vigor, size and productiveness in pullets, always hatch them early. For the Northern and Central States the first hatch should be out by the last week of March or the first week of April. In the Gulf States the hatching season is from September to April. *Early hatched chicks make more rapid gains* and the pullets lay during the winter instead of the following spring when the market is lowest. See page 33 for rate of growth.

HOW MANY EGGS TO SET—The number of eggs set should be 5 for every pullet you plan to keep for laying. That is, suppose you had 300 pullets last fall: If you cull as you should, you will have only about 100 yearling hens left by the following fall. To replace the ones sold you will need 200 pullets, therefore you should set 1000 eggs or buy six to seven hundred baby chicks. After you have accounted for your losses, sold the cockerels and culled the pullets, you should have a few over two hundred fine birds—birds from which you can safely depend upon making a good profit. Two to five percent mortality in baby chicks is not the rule, so you must allow for heavier losses. Also remember it rarely pays to keep hens after the second year unless they have been trapped and have proven their worth. Hence the above conservative estimate allowing for loss and culling of flock.

SELECTING BREEDERS—It is seldom a good plan to use eggs for hatching from all fowls in the flock. To insure good, vigorous chicks mate special breeding pens. These pens should be headed by vigorous male birds, strong in those features wherein the hens selected may appear weak, such as in type, size, color, markings, etc. Send for Conkey's special bulletin on "Mating to Secure High Egg Production," by Grant M. Curtis, see pages 15-18.

HATCHING EGGS—Even when the breeding stock has been wisely chosen, it is advisable to carefully select the eggs. This not only enhances the possibility of a good hatch, but has some effect upon the kind of eggs that will be produced by the pullets raised. Select upon the following characteristics: Size, Shape, Color, Shell.



No. 1 weighs $2\frac{1}{3}$ oz. or 28 oz. to a dozen, as required for "New Jersey Whites" on New York Market. No. 2 weighs 24 oz. per doz. standard for "Nearby Henneries and Fancies." No. 3 weighs $1\frac{3}{4}$ oz. No. 4 weighs $1\frac{1}{2}$ oz. No. 5 is so small and narrow that it would lie lengthwise in the filler. No. 6 is so long that it would be mashed in shipment.

Size — Size is very important as indicated in picture.

Shape — Eggs for incubation should be uniform in shape and of characteristic egg type. Exceptionally long, rounded, or short eggs are objectionable, as also are mal-

formed eggs. They are difficult to hatch and sometimes the offspring produce eggs of the same type. The old notion that long eggs produce males and round eggs, females, has not been verified by scientific observation.

COLOR—Color is important because it influences the market value of eggs which will be produced by the offspring. There is an increasing tendency to greater discrimination by market buyers. Under ordinary conditions strictly fresh chalk white eggs sell on some Eastern markets at from 5 cents to 10 cents above the same size and quality of egg with a tinted shell. Brown eggs should be of medium color, as extremely dark ones are difficult to candle, and as a rule do not hatch as well as lighter ones, due to excessive thickness of shell. The color of eggs produced should be governed by the market to which you plan to ship, so investigate.

SHELL—Strong shells are very desirable. Eggs with ridges, cracks, transparent spots, or deposits of lime or other foreign substances, should not be used. To avoid missing defects which do not show on the outside, candle the eggs. The use of Conkey's Y-O or cod liver oil makes strong shells.

CARE OF HATCHING EGGS—Collect eggs for hatching at least three times daily. Place in a room with a temperature between 50 and 60 degrees. Turn eggs at least once daily. If they are placed in ordinary fillers the small end should always be down. There is no practical advantage in washing slightly soiled eggs and eggs that are badly soiled should not be set. However, as a precaution, slightly soiled eggs are sometimes wiped with a cloth dampened with a one per cent solution of Conkey's Nox-i-cide. If they become dirty while under the hen, wash them with warm water. Although there does not appear to be any distinct loss of vitality in week old eggs, after that time deterioration is rapid, therefore do not keep them too long before setting.

HATCHING WITH INCUBATOR—A good incubator is fully as safe as a good hen. Properly handled, incubator hatches compare very favorably with hen hatches. Incubator-hatched chicks have the same vitality as hen-hatched chicks. With an incubator there is less danger of breaking, and incubators are easier to keep free from parasites. It is economical to hatch with an incubator. The fuel cost of a 300-egg incubator is less than the cost of feed required for setting hens necessary to produce a hatch of that size, not to mention the loss of eggs while the hens are setting.

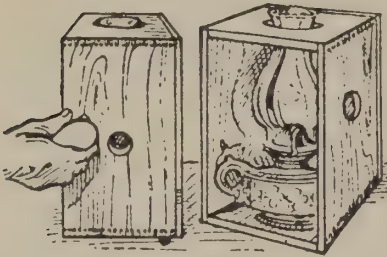
KEEP INCUBATOR CLEAN—Before hatching, the incubator should be given a scrubbing with soap and water and thorough disinfection with a one per cent solution of Conkey's Nox-i-cide. After washing the machine, it should be allowed to dry before being used.

HATCHING WITH HENS—Make sure the hens want to sit. A warm breast with feathers lacking, a ruffling of body feathers, clucking, and generous use of beak, all are good signs. Set the hens on nest eggs until they become accustomed to their new surroundings. If they do not leave the nest except for food and water, during the first day or two, it is generally safe to place the hatching eggs under them. The number of eggs set depends on the size of the hen. Twelve to fifteen are enough for Spring conditions. In setting hens it is very essential to take precaution against parasites. Often parasites will drive hens off the nests and sometimes even kill them. Before transferring them to their new quarters (night is the best time) dust them thoroughly with Conkey's Lice Powder. Dust again on the seventh and fifteenth day.

THE NEST—Nests, whether in battery or in single coop formation, should be roomy, cool and well ventilated. Protect the hens from their enemies, lice and mites. If set in hen houses guard against their being disturbed too much by other fowls. If set in outdoor coops, put in shady place and provide against flooding by rain. Treat all nests with a coating of full strength Conkey's Nox-i-cide as a preventive of mites, blue bugs, etc. Cut sod large enough to fill the box. Place it in dirt side up. This is to furnish proper moisture, in imitation of the hen's natural nest which is "stolen" in the fence corner, under the barn floor, etc. Cover with straw, and dust with Conkey's Lice Powder. Don't make nest too deep, as hen is likely to break the eggs as she jumps down. If

it is too shallow, chicks may jump out at hatching time, and by their cries induce the hen to follow. Arrange nests so hens can walk into them, without having to do any jumping down or up.

It is well to remove the chicks from the hen as soon as they are dry, removing also the egg shells, which are liable to slip over an egg, and so prevent the breaking of shell by the unhatched chick. A basket or box with straw in bottom and woolen cloth for sides and cover will keep the chicks comfortable if placed in a warm spot until the hatch is finished.



Home-Made Candler with Lamp

PERIOD OF INCUBATION—The period of incubation varies with different species of poultry, as shown in the following:

Hen eggs 21 days; pheasant eggs 22-24 days; duck eggs 28 days; duck (Muscovy) eggs 33-35 days; turkey eggs 28 days; peafowl eggs 28 days; guinea eggs 26-28 days; ostrich eggs 42 days; goose eggs 30-34 days and pigeon eggs 17 days.

The period of incubation also varies somewhat with conditions. A hatch may run one or two days over in some cases, due to an accident during incubation or to a low temperature, while on the other hand it may come off earlier.)

If the eggs are chilled or overheated, it is still advisable to continue the hatch, testing the eggs after a few days to determine the extent of the damage.

Chickens have been hatched from eggs left out of the incubator all night, as well as from eggs which have been subjected to a temperature of over 110°F. for a short time. But such conditions are extremely dangerous to a successful hatch. Make every effort to hold the temperature even.

CARE OF SETTING HENS AND EGGS—Setting hens should be fed cracked grains only—like Conkey's Scratch Grains. Put a fresh supply before them daily, with plenty of water, greens, grit and charcoal. Give no soft egg-producing feed, like mash. If eggs are broken, remove them at once, wash any smeared eggs with warm water, and supply fresh nesting material. On the seventh and fourteenth day test the eggs.

All infertile eggs and eggs with dead germs should be removed. If several hens are set at the same time, the remaining eggs from two or more hens may often be placed under one bird after the second test.

Setting hens should be looked at daily, especially if they show a tendency to stay off the nest too long. At hatching time if the hens become restless it may be necessary either to confine them or to remove some of the chicks. If the latter is done the chicks can either be given to a hen that has completed hatching or they may be held in a warm box for a few hours. During the last twenty-four hours the hens remain on the nests without food or water. For their comfort and to insure the hatches, put grains and water within their reach. After the chicks are hatched and placed in warm box, give the Biddies a good feed and time to exercise before placing in brood pens.

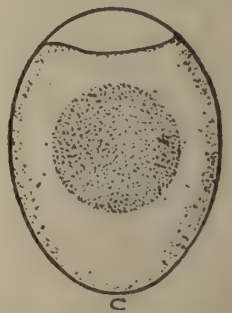
As soon as thirty-six hours have elapsed from the time the chicks are hatched, the families may be transferred—weather permitting—from the battery or nesting box to the outdoor brooder coop. The chicks should not be given food, however,



A



B



C

Egg on Seventh Day of Incubation. A, Dead Germ. B, Fertile Egg. C, Infertile Egg.

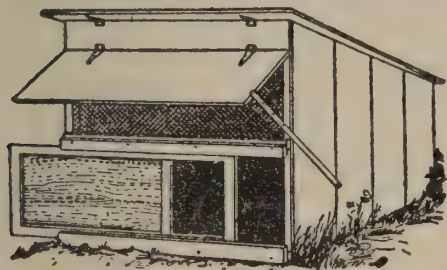
until forty-eight to seventy-two hours have passed from the time the hatch was complete. See page 24.

When the hens and chicks are comfortably located in the brooder coops, the nests can be cleaned, disinfected with Conkey's Nox-i-cide and used again. After hen-hatched chicks are three to five days old they should be treated with Conkey's Head Lice Ointment.

CARE AND FEEDING OF BABY CHICKS

THE most vital stage in the entire life of the chicken is the brooding period. Thousands of chicks die every year because of carelessness and improper methods of handling during this important time. It is useless to count on profits from broilers, pullets or breeding stock until you get your chicks safely through the first six weeks. Stunted, weak boned, slow feathering or narrow feathered chicks will never make a profit regardless of how good the original stock or how well the birds are handled after they mature. The time to look out is in the brooding.

BROODING—If you cannot grow good, strong, robust, healthy chicks, certainly you cannot expect to make a success with mature stock. No amount of care after the brooding and rearing period will correct damage done during this time. Therefore when the big rush of the chick season comes—do not let it go by and find you still raising chicks by the old expensive and tiresome “old hen” method. Figures Nos. 11 and 12 show how to build a brooder house that is very practical. If you cannot at present build a new house surely there is some old building on the place you can change into a brooder house. However, if you do intend to brood by hens some special equipment should be provided and special care taken to assist the Biddies.

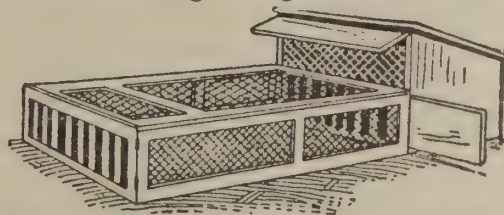


Brooding Coop. Sliding Panel is Solid Wood with Glass Window at Right End.

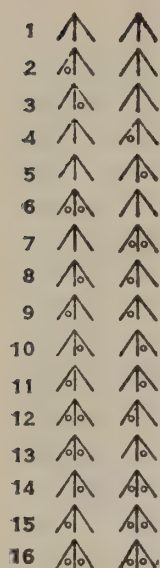
the coops can have an enclosed yard and the hens and chicks both given the range. The coop should be moved about to insure fresh green grass.

When the hens are moved from the nest to the brooder coop, they should be treated with Conkey's Lice Ointment—not powder. Lice are a great menace to little chicks raised with hens. Chicks should be inspected at least once a week. If lice are found on the head or under their wings, treat all with Conkey's Head Lice Ointment. The coop should be cleaned and disinfected with Conkey's Nox-i-cide.

The number of chicks to keep under a brooder will vary with the number of chicks desired, the size of the brooder and in addition the experience of the person doing the brooding. For the inexperienced, not over three hundred chicks should be started together, and it is doubtful if over five hundred should be attempted by even the more experienced. Generally speaking, chicks brooded in small numbers do better than those brooded in larger numbers. The Conkey slogan is small flocks well cared for are always more profitable than large numbers



Brooding Coop and Run. Chicks May be Confined with Sliding Door or Allowed Freedom while Hen is Kept in.



**Toe
Marking
for Chicks**

of neglected birds. If you have a portable brooder house be sure to move it to new and unused ground that is well drained and where grass will grow abundantly. If the house is permanently located, do not neglect to plow or dig up the runs and plant to some quick growing crop such as oats, rape, etc.

Clean and spray the house with Nox-i-cide. Replace broken window panes, repair torn glass-cloth, renew the canvas curtain in the front of the house, put up dark colored curtains at the windows so that you can darken the building at will. Examine the ventilators to be sure they are not warped out of shape. They should fit up tight and snug. Nail boards on a slant around the inside of the house close to the floor up against the walls—Figure No. 12, p. 29—to prevent chicks crowding in against the wall, and stretch wire across the corners of the building for the same purpose.

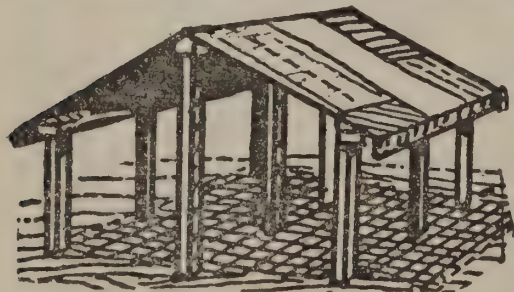
Cracker cans placed back of these corner partition wires—one at each corner—serve admirably for holding a 100 lb. bag of mash and scratch. A wire circle of hardware cloth, baby chick wire or 18 in. piece of roofing should be run around the hover to keep chicks from straying away from the heat before they have learned where it is. Sand, cut straw or cut alfalfa should be scattered 1 in. to 2 in. deep over the floor. Alfalfa hay is best if obtainable.

It is also very important that the brooder house be large enough for the chicks to get away from the hover to a cooler temperature when they desire. Close confinement in too warm a room results in wobbly-legged chicks with no vitality.

The sooner the chicks get on the ground, the better will be their health. Confine them close to the house, till they learn where they belong and where the heat is. After this allow them to range at will.

To be successful in the care and rearing of chicks you must know and give attention to their wants. One thing that cannot be neglected for a minute is their heat. You should set up the stove several days before the chicks arrive and be certain it is working well. If new, be sure you understand it. If it is old be sure the thermostat is working well. Be sure that the building is thoroughly dry and warm before the chicks are placed therein and then guard them night and day when the weather is bad, to be certain the heat is sufficient. Sacks or papers hung over the wire screen that is used to circle the brooder will help a great deal to hold in the heat around the hover during an unexpected cold snap. Keep a thermometer under the hover and have one hanging on the wall of the brooder house. Keep the temperature under the brooder about 95° during the first few days and gradually reduce the heat as the chicks become more hardy.

CHOICE OF FEED—Of course we want you to feed Conkey's (the original) Buttermilk Starting Feed because Conkey's, always the most popular, the most dependable and the most economical feed for baby chicks, is now even "Better Than Ever"; for it now comes to you **VITALIZED** with Conkey's Y-O.



**Feed Sack Shade for Chicks, also Good
Protection for Food and Water in
Summer**



Conkey's Y-O is a vitamin product which is the result of a patented process of sealing cod liver oil on brewer's yeast and other ingredients in a way which prevents the A and D vitamins in the cod liver oil from becoming impotent. You know, cod liver oil ordinarily begins to oxidize and lose its vitamin potency

soon after being exposed to air. In making Y-O, we use the best and most potent cod liver oil—we do not use any substitute. Y-O will hold vitamin A and D potency for a long time.

Vitamins are now recognized by all authorities to be the real controlling forces of bird and animal life. Without them vitality is lost, diseases appear and death results. Literally billions of chicks have died because of this one lack in their feed. Many have died of rickets (leg weakness)—Y-O would have saved them.

Why, then, take a chance with feeds which carry only straight cod liver oil or substitutes—all of which rapidly lose their potency—or by attempting to mix into the feed daily, cod liver oil which, unquestionably, begins to oxidize as soon as the container is opened, exposing it to air? Remember! Air gets into the can or barrel every time oil is taken out, hence oxidation goes steadily on even though the stopper or vent plug be replaced as the oil is removed.

Conkey's Y-O is not a new product. It has withstood the test of time and trials of every conceivable kind and is today recognized as the best and most dependable carrier of vitamins A, B and D. It is ordered by hatcherymen and commercial poultrymen in thousand pound and ton lots. A ton of Y-O by the way, will supply sufficient vitamins for 100,000 chicks for more than 30 days.

Thousands of requests have come to us asking that we VITALIZE Conkey's Buttermilk Starting Feed with Y-O and save people the job of mixing it themselves or worrying around trying to do a good job mixing in sticky, smelly cod liver oil. And so, because Y-O has proven its vitamin-holding potency beyond every question of doubt, we know we are safe in incorporating it into Conkey's Buttermilk Starting Feed and supplying you with a chick starter now guaranteed to be VITALIZED with vitamins A, B and D, in addition to the correct and perfect balance of the other important food elements needed to promote rapid growth of chicks. And we can do this without jeopardizing, in any way, the name Conkey—a name which for 30 years has stood for honesty, sincerity and dependability.



This is why we say to you, "A Great Chick Feed NOW Even Better Than Ever".

"We have tried practically all the leading brands of starting feed, but for years have found yours the best. Last year we brooded about 10,000 chicks—with excellent results—on Conkey's Buttermilk Starting Feed to which we added Y-O instead of cod liver oil, and have as fine a lot of birds as we ever raised. We recommend both Conkey's Starting Feed and Y-O to all our customers because we are particularly anxious that they have the best results possible." — Kerr Chickeries, Inc., Frenchtown, New Jersey.

THE FIRST CHOICE OF ALL FEEDS—In building Conkey's Buttermilk Starting Feed, Conkey has learned Nature's secret of "just what elements are needed and just how much of each to use". This feed truly "Fills the Bill" because it carries all the body building properties your chicks must have to live, thrive and become vigorous, husky broilers or healthy high-producing birds. The right kind and correct amount of every element needed—proteins, carbohydrates, fats, minerals and vitamins—is in this Starter and all are combined to bring about a rapid growth, strong bone development, and vigorous, sturdy chicks—coupled with minimum mortality.

LESS THAN 3 POUNDS OF FEED—Statistics show that a chick eats less than three pounds of feed during the first six weeks. Since part of this will be chick grains—see feeding directions below—the total investment in a starting feed, per chick, is exceedingly small. The possible margin of saving in first cost through buying a cheap chick starter or mixing your own would probably be

less than a cent per chick. Against this you would have less vigor and vitality, slower growth, greater susceptibility to diseases and almost certainly a heavier mortality. The loss of just one more chick out of each hundred will turn a possible saving on the first feed cost into a direct loss, while a heavy mortality would mean fewer pullets next fall or another brood to be raised. A second brood would force a greater investment to raise the same number of birds and a smaller profit would be returned, due to late maturing pullets.

It just does not pay to experiment with baby chicks,—play safe—use Conkey's Buttermilk Starting Feed with Y-O the first six weeks. It is already VITALIZED with Conkey's Y-O—no need to add cod liver oil, yeast or regulators of any kind.

INGREDIENTS—Buttermilk, Corn Meal, Corn Feed Meal, Oat-meal, Wheat Middlings, Raw Bone Meal, Blood Flour, Meat Meal, Crude Milk Albumen, Salt $\frac{1}{2}\%$, Y-O (Cod Liver Oil, Yeast, Soybean Oil Meal, Wheat Middlings, $\frac{1}{4}\%$ Red Oxide of Iron).

ANALYSIS—Crude protein, 14.00%; crude fat, 5.50%; crude fibre, 5.00%; nitro. free extract, 59.00%; carbohydrates, 64.00%.

HOW TO FEED YOUR BABY CHICKS—There are many methods of raising chicks. One is to put the feed before them as soon as they are 48 to 72 hours old and let them help themselves. If this method is followed, be sure every chick has an opportunity to get to the Mash. Allow 1" hopper space per chick and keep the hoppers *full all the time*. Place boards along the hoppers the first few days so chicks can reach the feed.

Another successful method is: after chicks are 48 to 72 hours old, spread Conkey's Starting Feed before the chicks on newspaper or feeding boards. After 10 minutes remove the feed. Repeat every two hours the first feeding day, then begin feeding 4 times daily all they will clean up in 10 to 20 minutes. After the 6th day gradually leave feed down longer each time until by the 10th day it is before them all the time. After the 14th day begin adding Conkey's Chick Grains to the ration. Feed grain sparingly at first in the litter night and morning. Steadily increase the grain until by the 6th week the chicks are eating as much grain as mash. After the 6th week gradually change to Conkey's Growing Mash and Growing Grains—second link in the Conkey Chain.

Both of these feeding methods have proven successful with countless thousands of chick raisers. It is all a matter of personal preference.

GRIT—Give the chicks fine grit as soon as they will pick it up, but don't let them fill up on it.

WATER—Give them plenty of clean, lukewarm water.

GREEN FEED—After 6th day give finely cut sprouted oats, tender grass or similar green stuff. If weather permits get them out on ground, after the dew is gone.

It is not enough simply to start a chick right. You must follow balanced feeding through the growing period, too. As the chick leaves "Babyhood" nature requires more bone and muscle-making material. A baby thrives on infant food up to a certain point. It is the same with baby chicks. They should have their Starting Feed the first five or six weeks, then be shifted to a heavier diet.

CHICK GRAINS—When chicks are two weeks old it is time to begin feeding Conkey's Chick Grains. Scatter a few handfuls of grain in the litter morning and night and gradually increase the amount until by the time the chicks are five weeks old they are eating as much grain as mash. You can then safely fill hoppers with grain and keep both mash and grain before them all the time.



USE CONKEY'S Y-O WITH OTHER FEEDS—If you do not have a supply of Conkey's Starting Feed with Buttermilk and Y-O mix 2% of Y-O with the feed you are using. Y-O can be purchased in 1 lb.; 2 lb.; 5 lb. packages or in 25 lb.; 50 lb.; and 100 lb. drums. Use it in your starting feed to insure vitamins A, B and D.

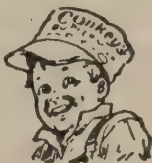
Conkey's Y-O—Cod Liver Oil—and Sunlight

In the past, the thought was advanced that when birds and animals got plenty of sunshine they did not need cod liver oil. This was an erroneous idea, arising from the discovery that the ultra violet rays of the sun have a very beneficial effect upon bone structure in young animals and birds—help to prevent leg weakness (rickets). It is true that all forms of domestic animal and bird life react favorably to sunlight, but sunlight alone will not supply sufficient D vitamins,—not to mention vitamins A and B—to care for bodily needs.

Further, sun rays are weaker in the fall, winter and spring. And finally, the sun does not shine steadily enough to be dependable as a source of vitamin D supply.

In Conkey's Y-O the potency of vitamins A, B and D makes possible and profitable the rearing of chicks in total absence of sunlight. This is due to two things: first, the use of only the highest testing cod liver oil and brewer's yeast; and, second, the method of infusing the oil with the yeast and other ingredients so that vitamin potency lasts for a long time.

NOTE:—Brewer's yeast (Marmite) is known as "a dead yeast." It will not ferment like baker's yeast and the vitamin B strength of brewer's yeast is far greater than in raw baker's yeast. See inside front and back cover.



Kindly enter our order for 100 lb. drum of Y-O. We are having very good results with breeding pens and believe that Y-O is responsible for most of our success. Fertility is running around 95% and hatches never run under 80% of all eggs set, which is the best we ever have had.—Anderson Poultry Farm, Wyoming, Minn.

I have 23 pullets which I raised from baby chicks. I got 88 eggs in August, 230 in September, 255 in October, 320 in November, 526 in December and inside of 5 months I got 1,419 eggs. These birds were raised on Conkey's feeds and Conkey's Y-O, which I highly recommend to both large and small poultry raisers.—Clarence Martin, Baltimore, Md.

Have a Conkey Corner in Your Poultry House

THE ACTION OF VITAMINS WHEN FED TO ANIMALS OR BIRDS

EACH class of vitamins plays a separate and collective part in the life, health and producing power of all animals and birds. Without these vital forces, eggs cease to be fertile and their hatchability becomes nil. Hens cease to lay, lose their vigor, their health and die; chicks cease to grow, sicken and die; young animals become sickly, stunted and death results; and adult animals fail to breed and have young.

VITAMIN A helps to guard against contracting nutritional roup, diseases of the eyes, etc. It helps the functioning of the reproductive organs. With birds it increases egg production and increases the fertility and hatchability of the eggs. With pigs, rabbits, foxes, dogs, cats—all animals—it increases the number or vitality of the off-spring. Vigorous growth and rapid development are more pronounced when the ration is abundantly supplied with Vitamin A.

VITAMIN B is a great aid to digestion. It assists in the assimilation and absorption of the food as it passes through the intestines. It promotes more rapid growth of muscle and bone and also adds greatly to the luster and smoothness of the plumage or fur. The action of Vitamin B on the reproductive organs is very marked. In fowls, production is increased and the fertility and hatchability run especially high. In animals, the adults have better health while carrying their young and the young are likely to be more numerous. All will have greater resistance to disease. Vitamin B is an anti-neurotic vitamin and assists the body greatly in the prevention or cure of nervous disorders.

VITAMIN D is very important and if abundant in the ration will prevent or cure rickets (leg weakness). In the process of digestion it aids the organs to assimilate the proper amounts of calcium and phosphorus. It is probable that this vitamin plays a large part in assisting the digestive organs to liberate and assimilate quantities of calcium sufficiently large to always insure birds laying eggs that have exceptionally strong shells and animals delivering young exceptionally strong in bone development.

When all three vitamins—A, B and D—are added to the ration, they assist the digestive organs in dissolving and assimilating the mineral elements in the feed, resulting in a more complete process of digestion. In other words, when an abundance of vitamins A, B and D are always present in the ration both birds and animals actually digest more of the food they eat. With mature birds this results in more eggs, larger eggs, stronger shelled eggs, increased fertility and greater hatchability. With chicks and growing animals the presence of these vitamins not only prevents rickets (leg weakness) but assures most rapid growth of muscle, bone and all-around development.

From all the mass of experimental and research data, it has been learned that all well balanced rations must carry a certain amount of vitamins. And so in building feed formulas one must now add, in addition to the proteins, the carbohydrates, the fats and the minerals—*vitamins*. Easy as this may seem there is one great stumbling block: the difficulty of retaining the potency of vitamins A and D in cod liver oil—which is one of the greatest carriers of vitamins known—when the oil is exposed to air. Conkey's Y-O is the only vitamin food which preserves the potency of vitamins A and D. Use it in all your feeds.

CONKEY'S PORTABLE BROODER HOUSE PLAN

(See Plans on Next Page)

The Conkey Portable Brooder House Plan is the result of study of hundreds of brooder houses on farms and poultry plants. It has several new exclusively Conkey features that make it a most popular style.

FIRST—The Feed Bin. Bags of feed are dumped into the bin from the outside. The old way of carrying sacks of feed inside the house and setting them down on the floor often resulted in accidentally killing chicks. Also, sacks of feed in the brooder became dirty and torn and chicks sometimes would swallow and choke on sack strings. Another terrible waste resulted from chicks pecking holes in the sacks and a consequent loss of feed. Note particularly the rainproof construction of the bin. The bin opens on inside also, allowing for scooping out of feed into the hoppers.

SECOND—Examine closely the front windows. Wire frames keep the chicks from roosting on window edges while the window arrangement prevents cold draughts striking the chicks.

THIRD—Back ventilators take off top and bottom heat in summer. This house is cooler in summer than many shade contrivances. Cleaning is made easy—see bottom back ventilator, shown on page 28.

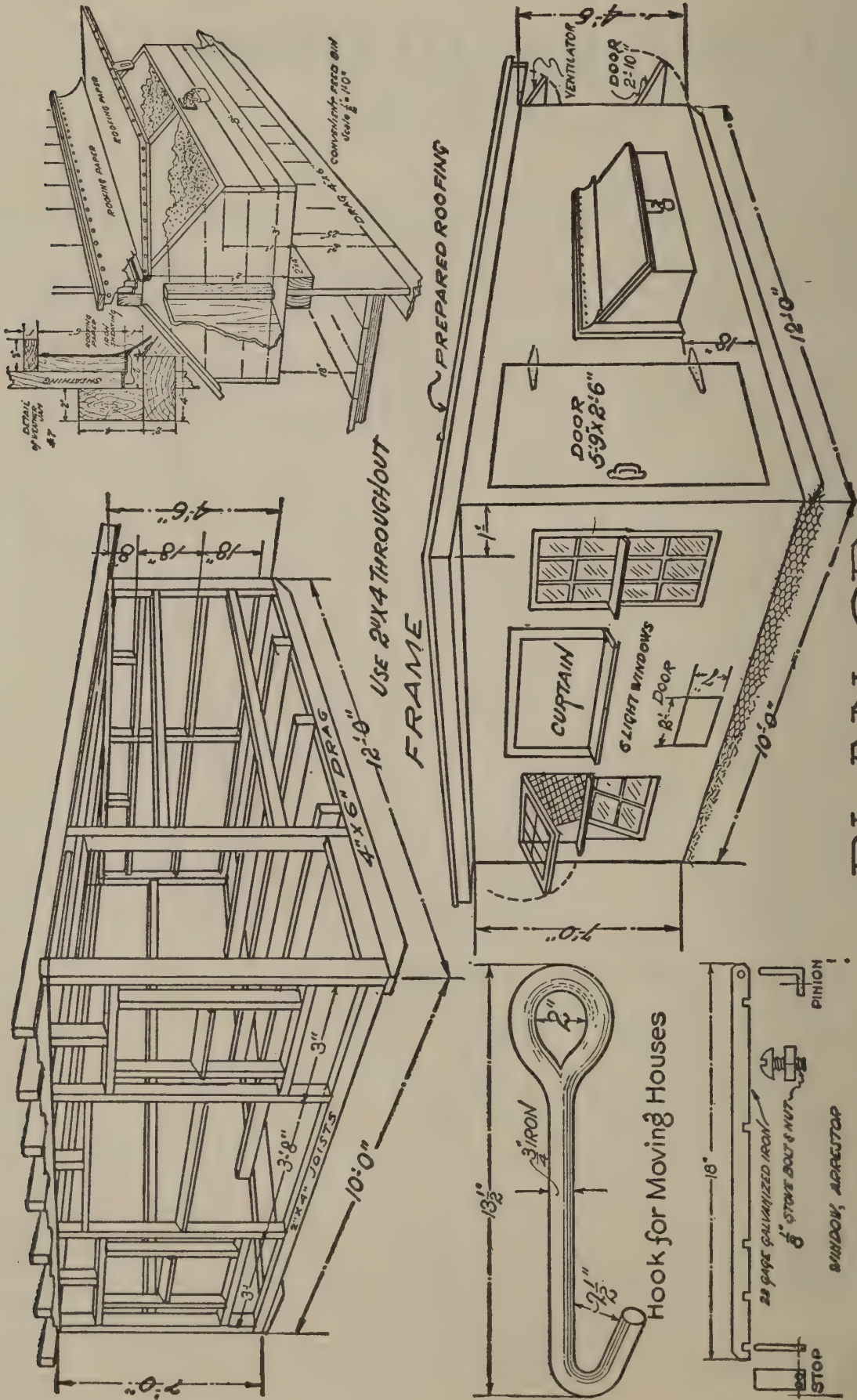
Material For Brooder House

2 Pieces 4"x6"x12'	(Drag)
10 Pieces 2"x4"x14'	(Rafters, front and far side wall)
14 Pieces 2"x4"x10'	(Joist, side, back, top plate and right side)
2 Pieces 1"x8"x12'	(Shuffle boards)
10 Pieces 1"x2"x12'	(Curtain, window and ventilator frame screens)
1 Piece 1"x6"x10'	(Window sills)
1 Piece 1"x12"x4'	(Lower shields)
1 Piece 1"x8"x4'	(Upper shields)
700 Feet B. M. Ship lap	(Floor, siding and sheathing)
2 Pieces 1"x4"x14'	(Finishing board on roof—sides)
2 Pieces 1"x4"x10'	(Finishing board on roof—front and back)
10 Pieces 1"x6"x12'	Flooring (Feed bin)

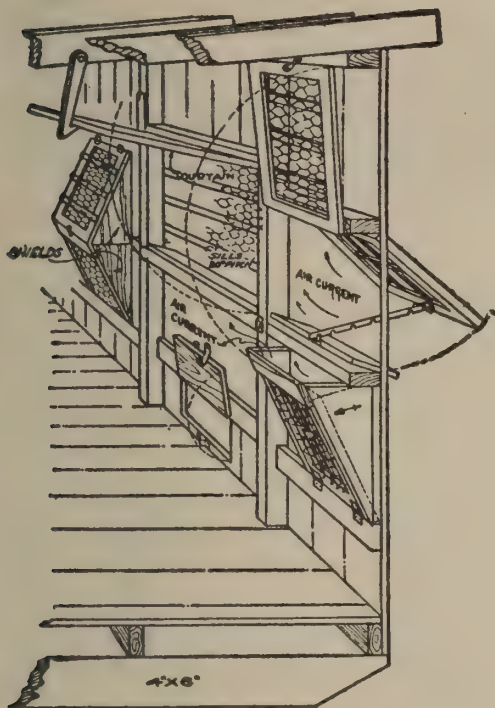
Roofing, Hardware, Sash, Etc.

2 Rolls roofing	
4 2'x2' sash	
26 Linear feet 1" mesh poultry netting, 30" wide	
9 Pair 3" butt hinges	
3 Pair 6" strap hinges (door and lower ventilator)	
1¼ Yard Muslin for screen	
10 Lbs. 6d nails	
5 Lbs. 8d nails	
5 Lbs. 10d nails	
2 Lbs. 20d nails	
1 Lb. Poultry netting staples	
3 Small window bolts	(lower windows and small door)
2 Large window bolts	(back lower ventilator, if needed otherwise 2 hooks and a button)

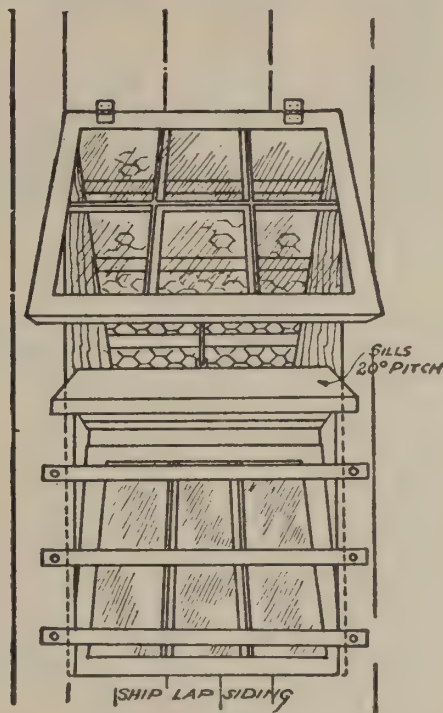
A 28"x48" blue print can be obtained by writing The G. E. Conkey Co., Service Department, and enclosing 30c in stamps. We do not manufacture.



PLAN OF
PORTABLE BROODER HOUSE
Figure No. 11—If interested in Constructing your Brooder House after this Plan send 30c for Blue Print.

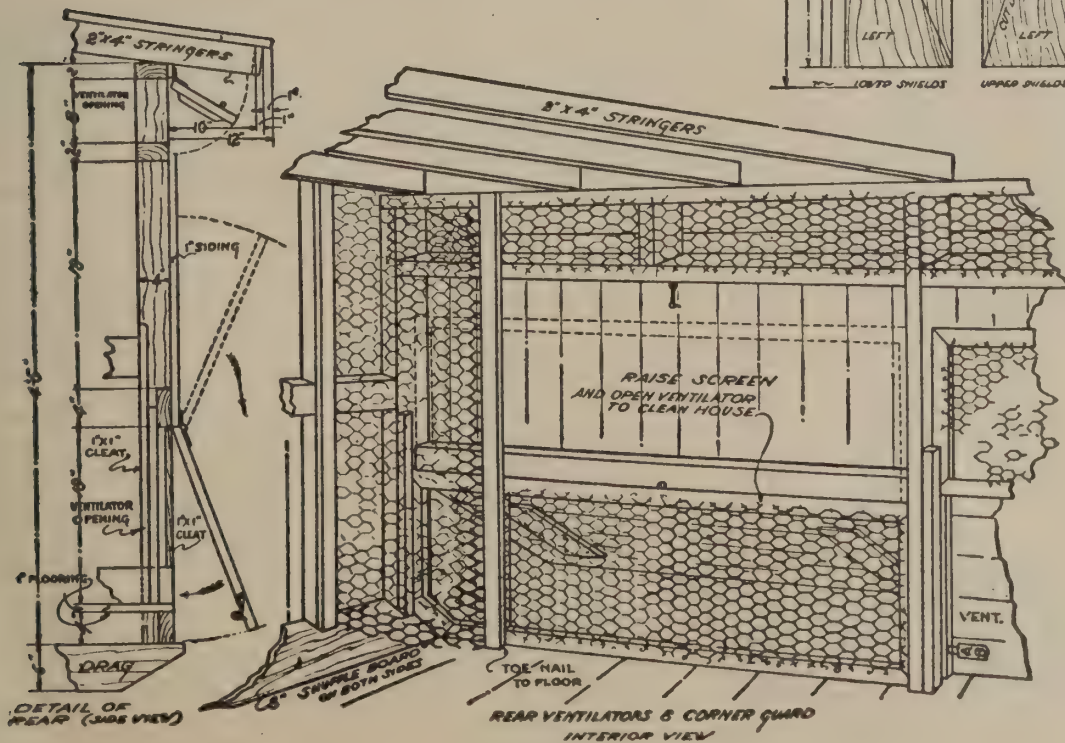
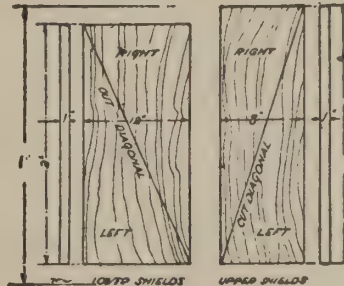


SECTIONAL VIEW
OF FRONT WINDOWS & VENTILATORS (INSIDE)
Date 8-1-1917



FRONT OF WINDOWS
SHOWING VENTILATOR SYSTEM & THIEF GUARD

Figure No. 12
Details of Brooder House





GROWING STOCK

AS CHICKS become half or two-thirds grown there is a tendency for the owner to neglect them. They seem so husky and vigorous you are likely to forget that this very vigor and vitality is largely due to the care and attention given to their many needs. Neglecting the chicks at this stage invariably re-acts unfavorably. The youngsters allowed to rough it do NOT continue to grow with the rapidity they should. They become thin, their feathers grow more slowly and body development slackens.

Just because "the chick season is over" does not mean that the growing birds no longer need care. The quality of next winter's pullets and yearling hens depends very largely on the care given from now on. As the chicks develop, they must have enlarged quarters. Right here is where many losses begin. Five hundred chicks under a 500 capacity brooder is too small inside of two weeks and the crowding increases the risk as the chicks grow.

Your pullets and cockerels should be separated as early as possible. Experience soon enables you to recognize the difference very early for cockerels stand more erect and have a triangle shaped body. Pullets have long bodies and develop tail and wing feathers more quickly. Different breeds have color markings and it pays to know your own breed thoroughly. It is well to divide the sexes and at the same time, prevent overcrowding.

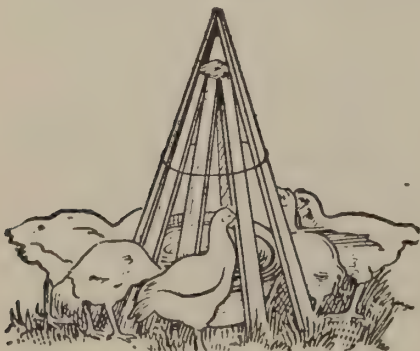
Some of the best cockerels should also be put by themselves, so that will give three groups, consisting of pullets, which are future layers, a few breed cockerels and all the rest consisting of cockerels and young runt pullets, which are for broilers. The pullets and breed cockerels should be in separate yards, where they are allowed to develop naturally, with plenty of Growing Mash with Y-O, Growing Grains and green feed. All birds intended for broiler and fryer purposes should have only limited yards because they should not exercise.

Chicks must be taught early to roost. Put some low roosts in the brooder house early—5th to 6th week—and the chicks will gradually learn where the perches are and in 30 days to six weeks they all have learned how to roost.

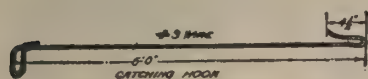
Growing pullets must have every opportunity to build up strong bodies in order to become good layers. A large percentage of fall colds, roup conditions and paralysis among pullets is due to wrong management during these summer months. These future layers cannot stand the intensive methods used for broilers. They must not be annoyed by the cockerels. They must have plenty of green feed and be kept on Growing rations until they are near the laying period.

Worst of all, pullets that are neglected and become stunted during the middle or latter part of their growth rarely, if ever, lay as many eggs as the well cared for birds. Where then, is the economy?

Consider for a moment the fact that it takes,



Protected Pan for Water
or Mash



Wire Hook for Catching
Fowls

generally speaking, the first 75 to 100 eggs laid by the pullet to pay the cost of raising her and feeding her till these eggs are laid. Unless she starts laying early and lays well no profit will be made whatever, as she only pays back what she already owes you.

We are discussing, of course, the average fair-to-good hen—the bird that lays from 100 to 160 eggs in a year. To be profitable she must begin her lay early in the winter, certainly by December 1st, and increase rapidly till in March and April she will be laying about 20 eggs per month. She must lay almost as well through June and July in order to make a profit above the low price of eggs at that season and to reach her 160 mark. Only the better hens will keep steadily on the job through August and September, and just the “star performers” alone will be carrying on in October and November. (See Annual Egg Record Chart page 40).

Do not be misled into the common belief that when birds do not start laying till mid-winter that they will lay late into the following fall. On the contrary these birds will, in all probability, be the first to molt in the summer. This fact has been proved repeatedly by trapnest records. Pullets that begin laying early in the winter as a rule lay steadily. Therefore any neglect of the young stock will surely re-act unfavorably on your own pocketbook next fall and winter. Read this over again as it is very important. Resolve to keep your young stock up and coming all the time. Keep Conkey's Gecco Growing Mash with Y-O and Growing Grains—the second link in the Conkey Chain—before the birds all the time even when their range is excellent. If this feed is not available be sure to use care in purchasing a first class balanced ration for your growing stock and add 2% of Conkey's Y-O to their mash.

If the growing stock at any time lack vitamins A, B and D, the result will be slow developing, undersized pullets, dragging into the fall and early winter with a few scattering small and irregular eggs. (See page 26). For this reason we recommend feeding the growing stock Y-O. Then their rapid development, their blood-red combs, yellow legs, lustrous plumage and alert bearing will amaze and delight you. You will experience the “big thrill” that always comes when the whole flock of pullets snap into a lay almost simultaneously and, like a great factory, throb and pulsate with life and action.

RATE OF CHICK GROWTH—Compare the weight of your chicks with the standard for weight and feed required as used by Cornell University and the New Jersey Experiment Station as follows:

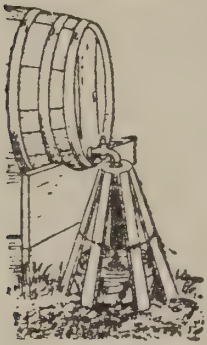
Age in Weeks	Weight	Feed Required
Leghorns, etc.		
8	1 lb.	3.5 lbs.
14	2 lbs.	9.8 lbs.
17	2½ lbs.	13.6 lbs.
21	3 lbs.	19.4 lbs.
American Breeds		
7	1 lb.	3.0 lbs.
11	2 lbs.	7.2 lbs.
16	3 lbs.	13.6 lbs.
22	4 lbs.	23.7 lbs.

Observe that the first gain is the cheapest, hence the importance of the right start..



CARE AND FEEDING OF MATURE STOCK

NATURE OF THE HEN—In order to feed intelligently, it is necessary to be familiar with the nature of the hen, the feed, and the finished product, which in this case is the egg. The hen is the machine that transforms feed into this finished product. In caring for her we must always bear in mind that her digestive system is short and comparatively simple. It has only slight provision, if any, for the digestion of fiber, and does not have a very large capacity. Consequently, coarse and bulky feeds are not proper for hens. On the other hand, the large use of concentrated feeds always increases the danger of indigestion, and that is why it is so necessary to have a proper balance in poultry feed rations.



Barrel of Water
for Hens and
Growing Stock.
Clean Barrel
Often.

It has been estimated that a hen consumes, in proportion to her weight, twice as much dry matter as does a dairy cow. She is a most efficient transformer of raw material into a finished product and properly managed pays handsome returns.

As a rule it requires from 75 to 80 per cent of the feed consumed to meet maintenance needs, the remainder of the feed going toward profitable production.

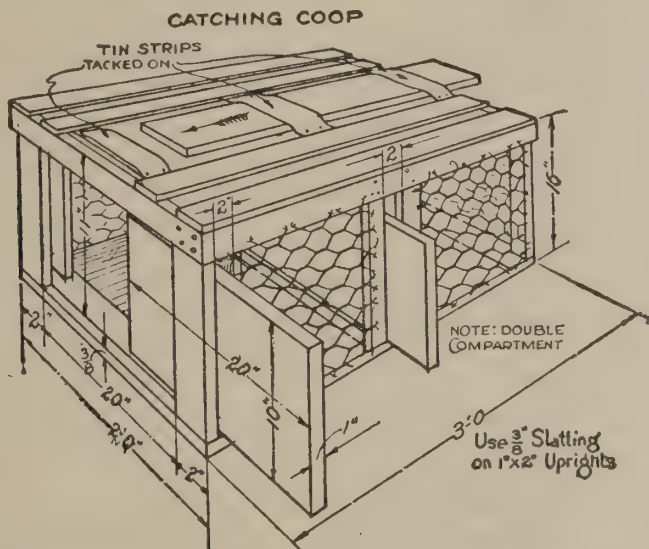
HOUSING THE PULLETS—If you have cared for your chicks properly, the reward for your labor is at hand as the pullets approach maturity. This is the time to prepare the laying house for the pullets by giving it the "house cleaning" of the year. Do not stop at scraping the droppings board and shoveling up the litter from the floor, but do an honest-to-goodness job of cleaning. Sweep the cobwebs off the ceiling, clean and scrape the floor and walls close to the floor; clean the canvas curtains or replace with new material; replace window panes or mend the torn glass-cloth. Rake and pick up litter off the yards or range. Finally, disinfect the whole inside of the building including walls, ceiling, roosts, droppings board, floors, nest boxes, feed hoppers and water containers—everything with which the birds are likely to come in contact—with Conkey's Nox-i-cide to kill odors and germs and make things sanitary and free from parasites.

At least thirty days before pullets are expected to begin laying, they should be moved to these winter quarters in order to get them accustomed to their new surroundings and allow you time to make the necessary changes in their ration. Give them a good treatment of Conkey's Worm Remedy while they are still on the range, or immediately after being housed in their new quarters.

CULLING THE PULLETS—Everything should now be ready for the final going over of the young flock. You will probably find about one out of every ten birds that should be sold at once, as their upkeep will be likely to exceed their production. Handle each bird carefully. Look for physical defects or weaknesses and characteristics that indicate the bird is likely to be a poor layer.

If many of these characteristics are present in one individual it should be culled out. Here are bad points to look out for:

1. An under-sized, small boned pullet with little or no comb development.
2. A slight undeveloped body with long, coarse legs and little head and comb development, indicating a bird that will be very slow to mature.
3. A long narrow; crow-shaped head.
4. A thick, coarse head showing thick rolls of flesh over the eyes.
5. Eyes that are sunken—not large and prominent.
6. A narrow, pinched back near the tail head.
7. A knock-kneed bird.
8. Birds showing an extreme narrowness of feather. This indicates lack of vitality and such a bird is likely to become sick and perhaps scatter disease throughout the rest of your flock.



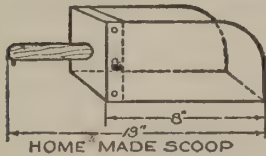
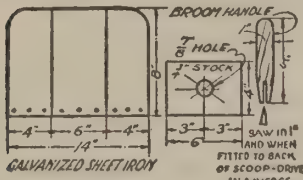
FEEDING THE PULLETS—Pullets should not be put on egg mash until they are fully developed and well fleshed. Forcing your pullets to lay prematurely will simply react injuriously on YOU. For the birds will soon slacken in their lay and may even go into a partial molt. A partial molt in the fall or early winter invariably means few if any eggs until the birds recover. Therefore it is sound business sense to withhold the laying mash from your pullets until they have reached maturity and have sufficient reserve energy to lay without pause.

Give an abundance of grain at this time if their body weight is not up to the standard for age and for the weight the pullet should be according to the variety and the strain. Generally speaking, Leghorns should be mature at four and a half to five months and should weigh $3\frac{1}{2}$ pounds; Rhode Island Reds mature at five and a half to six and a half months and weigh $5\frac{1}{2}$ pounds; Rocks and Wyandottes mature at six to seven months and weigh 6 pounds and $5\frac{1}{2}$ pounds respectively.

As the pullets mature and their ovaries develop the combs begin to develop also. In every flock you will always find many birds mature more rapidly than others. If you can divide your flock, putting all the fully developed pullets in one flock and in another flock the ones that are running a couple of weeks behind the more mature group, it will pay to separate them. You can then begin feeding the first group an egg making mash and keep the smaller, slower developing pullets a couple of weeks longer on growing mash and plenty of scratch. In this way your birds will all have ample reserve energy built up to keep them steadily on the job when once they begin to lay. This practice will also help to prevent pullets from continuously laying small eggs.

Introduce the laying mash gradually as any sudden change in feed is likely to cause the birds to go into a neck molt. It is best to take ten to eighteen days to make the change from growing to laying mash. Feed scratch grains generously—about 55 to 60% scratch grains to mash—until the change in mash is completed. Then slowly reduce the amount of grain given until the ration runs

about equal parts of grain to mash. A good laying mash should have 20% animal food in its composition if best results are expected.

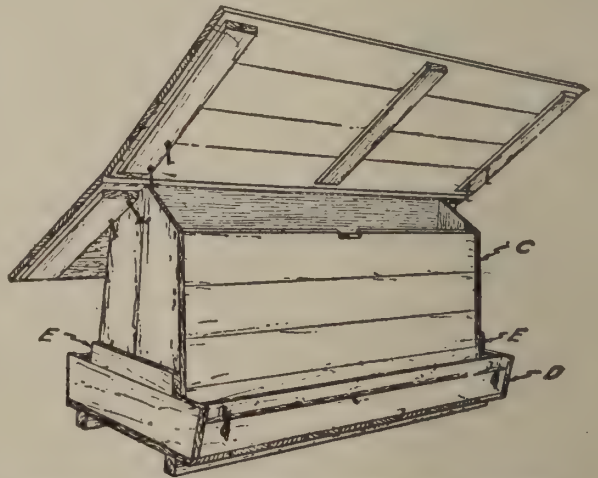


CARE OF YEARLING HENS—In the late fall and early winter hens require very different care from pullets. The pullets are just beginning their lay, while the hens are closing their year's performance. Since you have kept only the best hens, they are also the ones that are last to molt. They will be late in getting their new feathers and sadly in need of a few weeks rest. Therefore do not expect them to begin laying again till around the first of the new year.

For this reason you must not allow the hens to run with the pullets and eat their ration, which you are gradually changing for heavier egg production by decreasing the grain allowance. But what these deserving hens need is more grain and less mash. This will allow them to rapidly regain their strength, and when they once more are fully feathered (see chapter on culling, page 45) gradually reduce the grain until it is once more 50%, or a trifle less, of their daily feed. This will stimulate them into a lay—provided the mash you are using contains 20% animal food, like Conkey's does—and the hens will give a good account of themselves for another year.

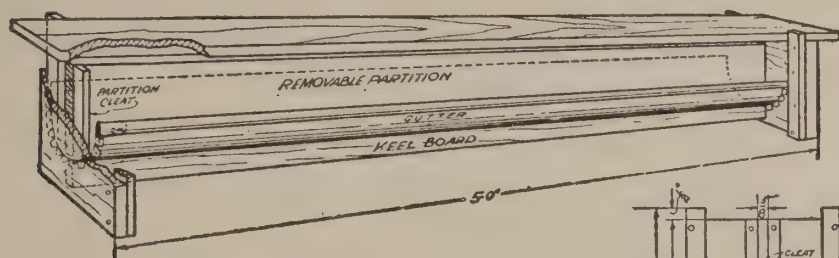
HOW TO FEED MASH—Keep Conkey's Gecco Egg Mash—third link in the Conkey chain—dry, just as it comes from the bag, in open hoppers before hens all the time. Feeding mash dry requires much less skill than wet feeding, gives all hens an equal chance and insures a higher average of health. Some people discontinue feeding dry mash in summer. Don't do it. This practice usually results in a low egg yield and an early molt. Don't be afraid that your hens will get "too fat" to lay. Laying hens do not ordinarily get "too fat" on a laying ration (which of course, is different from a fattening ration), provided they get sufficient exercise. Conkey does not advise wet mash feeding, since wet mash, if not fed exactly right, causes considerable trouble. Dry mash, eaten in small bites, stimulates a copious flow of natural digestive secretions, whereas the gulping of large mouthfuls of wet feed is likely to have an opposite effect. The dry mash also induces a large consumption of water, which, in itself, is beneficial to all poultry, and especially to laying hens. Eggs contain over 65% water.

However, to increase mash consumption—to maintain egg production and aid molting hens—in late summer and early fall, July, August and September, some poultry men find it beneficial to give a feeding of wet mash every morning, or at noon, at the same time keeping dry mash hoppers open. This additional feeding of wet mash (which is more palatable than dry) gives a needed increase of mash consumption at a time when the hens may not eat as much as ordinarily,

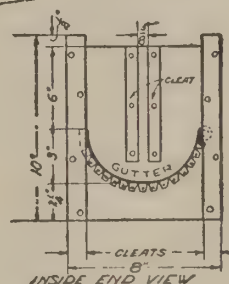


Range Feed Hopper (Mass. Ag. College)

If mash is fed wet, have it moist and crumbly, never wet and sloppy. Feed only as much as the birds will clean up in fifteen minutes, and be sure after the feeding to clean pans or troughs in which mash is fed.



HANDY GALVANIZED GUTTER TROUGH
FOR MOIST MASH



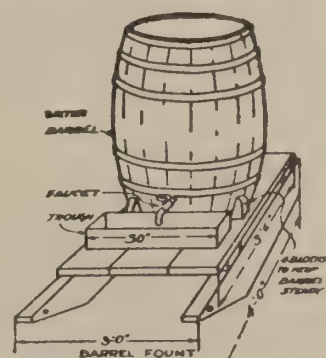
HOW TO FEED GRAINS—Grain feeding might be called the “control ration” for either increasing or decreasing it will directly affect body weight and egg production. You should endeavor to feed sufficient grain to maintain body weight but not enough to retard egg production. To check up on this, spot a few birds with paint and weigh them frequently. In this way you will know if your flock is losing, gaining or maintaining weight and it is then a simple matter to increase, decrease or continue to feed the same amount of grain. In the fall and winter feed 100 lbs. to 80 lbs. of grain per each 100 lbs. of mash consumed. In late winter and early spring feed 80 lbs. to 60 lbs. of grain to the 100 lbs. of mash eaten and in summer feed 50 lbs. to 30 lbs. of grain to 100 lbs. of mash.

WATER—Always keep plenty of fresh water handy. Don't let water get stale in summer or freeze in winter. Thoroughly wash and disinfect fountains and premises at least once a week with Conkey's Noxi-cide. In wet, stormy, “roupy” weather, keep Conkey's Roup Remedy in the drinking water as a preventive of colds, catarrh, roup, pneumonia, and the like. In summer, if diarrhea is noticeable, use Conkey's Cholera Remedy.

GRIT, OYSTER SHELL AND CHARCOAL—Keep a supply before birds all the time

GREENSTUFF—If hens are yarded, give them a daily feeding, at noon, of sprouted oats, lawn clippings, chopped cabbage, carrots, mangel beets or similar green food. Cabbages or mangel beets, hung up in the poultry house just above the birds' heads, so the hens must jump for every bite, afford good exercise, and are enjoyed by hens in close confinement. Caution—Do not let cabbage freeze in winter. In this condition it's dangerous. Leaves from legume hay such as alfalfa, soybeans, etc., make good substitutes for fresh greens. Place in racks within easy reach of the birds.

Fowls that do not get sufficient greenstuff have all the more need for cod liver oil or Conkey's Y-O which combines yeast with cod liver oil and insures an ample supply of A, B and D vitamins.



SPROUTED OATS—There are many good oat-sprouters. Ask your dealer. Or, you can build a frame to hold seven trays—one for each day. First, soak oats in a pail of warm water, to which you have added a few drops of formaldehyde or Conkey's Nox-i-cide, to prevent mould, to each quart. After 24 hours, place oats in trays to a depth of one inch. The oats should be sprinkled once or twice a day, depending on how fast they dry out. In cold weather, warm water will hasten growth. It may be advisable to cover oats with burlap a few days to hold the moisture.

For baby chicks only the tops or blades, finely chopped, should be used. For growing and laying flocks begin feeding when the sprouts are three or four inches high. One square inch of oats a day per fowl (not baby chicks) is a safe amount. Other feeds being properly balanced, fowls will not overeat on greens.

MINERALS—The common opinion that excess mineral elements make for safety in chick and poultry nutrition and at most can do no harm is ill founded and erroneous. Excessive minerals added to poultry feeds retard growth and deplete vigor and vitality.



Vitamins Help
Assimilation of
Minerals

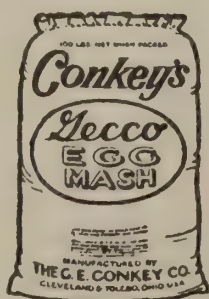
The important factor in a poultry ration is to have the proper balance of the right kind of feeds so that the birds will get the necessary mineral elements out of their feed and grit. This is the natural and only dependable way.

There is only one modification of this statement and that is when vitamins A, B and D are added to the feeds, the vitamins help the digestive organ in some manner, no one knows just how, to more completely dissolve and assimilate the mineral elements that are already a part of the various ingredients and which would otherwise be passed off unused. This is how and why Conkey's Y-O helps the chick, the growing stock and the laying hen. Y-O is not a mineral food. It is a vitamin food. There is a big difference.

CONKEY'S GECCO EGG MASH

With or Without Y-O

Contains 20% Animal Food



Analysis

Crude Protein, - -	20%
Crude Fat - - -	5%
Crude Fiber - - -	7%
Nitrogen Free Extract	46%
Carbohydrate - -	53%

Ingredients

Buttermilk, Wheat Middlings, Meat Scrap, Corn Feed Meal, Wheat Bran, Old Process Oil Meal, Alfalfa Meal, Soybean Oil Meal, Corn Gluten Feed, Steam Bone Meal, 1% Calcium Carbonate, ½% Salt.



ARTIFICIAL LIGHTS FOR LAYERS—The use of artificial lights in the laying house to lengthen short winter days, has been found to profitably stimulate winter egg production. Pullets will lay about 6 more eggs per bird during the winter months and hens about 12 more eggs per bird. However, the yearly production of the birds is not increased. It simply enables the owner to get a few more eggs at a time when eggs are highest in price. If lights are started, they should never be stopped abruptly or operated irregularly as even so slight a change as turning the lights on twenty minutes too early, may throw the whole flock into a neck molt and egg production will be stopped for from three to six weeks. Send for Conkey's Bulletin on Artificial Lights For Poultry.

HOW TO FEED "ALL MASH RATION" TO LAYING HENS

MANY poultry raisers are interested in the recently advocated all mash system for feeding poultry. Experiments carried on by poultry departments and various state universities throughout the country apparently show that hens can be made to lay equally as well by the use of one combination feed, known as an All Mash Ration, as when a mash and scratch is fed separately.

Conkey, realizing the value of the great work that is being carried on by the Agricultural Colleges and desiring to co-operate in every way possible with the state experiment stations, the farmers and the poultrymen, has prepared an All Mash Ration, by grinding the whole grains that are in Conkey's pure, clean scratch feeds and combining this with the mash ingredients, thus making the final product a mash and scratch feed combined.

The popularity of the All Mash idea for poultry lies chiefly in the ease with which it can be fed. There is nothing to do but keep the hoppers full. Conkey's All Mash is complete in itself, carrying the correct amount of animal and vegetable protein for heavy production without forcing. The Conkey All Mash formula carries 10% animal food which is the amount recommended by Agricultural Experiment Stations. During cold weather it is advisable to feed some grain on cold days. And in summer it is advisable to add 5% to 6% of either meat scrap or dried buttermilk to the mash.

It is understood, of course, that green food, grit and water must be supplied at all times. The usual care should also be exercised to insure sanitation.

TAKE 10 TO 18 DAYS TO GET THE BIRDS ON THIS MASH—Always make any changes in feeding gradually, because a quick change of food is likely to throw the whole flock into a false molt (often called neck molt) and when this happens few or no eggs are obtained for several weeks. The best time to make the change for layers is from April to June or during the fall molt. If growing pullets are to be changed to all mash do so before they start laying.

Use extra care in making the change. Often it takes hens from four to six weeks to accustom themselves to going without grain and if you force them, through starvation, to live on the all mash ration all at once before they are accustomed to it, you will likely suffer a severe decrease in egg yield.

NOTE: Conkey neither recommends nor condemns the All Mash method of feeding but has prepared this mash, which is up to the Conkey standard in every way, for those who wish to practice this method of feeding.

FEEDING SCHEDULES

While Conkey Feeds are recommended in these schedules, it is understood that the same directions will apply for use with any first class balanced ration adapted to the stage of development. Always use care in purchasing so as to make sure of a first class balanced ration for your flock.

Mediterranean Varieties			Rocks, Reds, Wyandottes, etc.		
No. Birds	Mash	Scratch	No. Chicks	Mash	Scratch
CHICKS—1st TO 6th WEEK					
100	175 lbs.	90 lbs.	100	190 lbs.	100 lbs.
GROWING STOCK—6 TO 20 WEEKS					
100	860 lbs.	700 lbs.	100	950 lbs.	800 lbs.
PULLETS AND HENS—30 DAYS					
100	300 lbs.	300 lbs.	100	400 lbs.	400 lbs.

Note:—The amount of mash and scratch eaten by the hens will vary according to the time of year. In late fall and winter it should be about equal; in late winter and early spring it should be about 60% Mash and 40% Scratch and during hot weather it should be about 75% Mash and 25% Scratch.

SCHEDULES FOR CONKEY'S POULTRY TONIC

(For Conditioning Birds)

CHICKS—Second to Sixth week.

DRY FEEDING—Mix 2 lbs. of Conkey's Poultry Tonic with every 50 lbs. of starting feed or chick dry mash.

WET FEEDING—Conkey advises against feeding wet mashes to chicks, but if poultrymen prefer this method, add one teaspoonful of Conkey's Poultry Tonic to each quart of wet mash.

GROWING BIRDS—Sixth week to maturity.

DRY FEEDING—Mix 2½ lbs. of Conkey's Poultry Tonic with every 50 lbs. of growing dry mash or developing feed.

WET FEEDING—Mix a level teaspoonful of Conkey's Poultry Tonic in each quart.

HOW MUCH TONIC TO BUY

10 Hens....	1½	Lb.	Pkg.
25 Hens....	3¼	Lb.	Pkg.
50 Hens....	7	Lb.	Pkg.
100 Hens....	12	Lb.	Pail
250 Hens....	25	Lb.	Pail
500 Hens....	50	Lb.	Bag
1000 Hens...	100	Lb.	Bag.

LAYING FOWLS—

DRY FEEDING—Mix 6 lbs. of Conkey's Poultry Tonic in every 100 lbs. of dry or egg mash.

WET FEEDING—If you feed wet be sure to mix one heaping tablespoonful of Conkey's Poultry Tonic in each quart of mash and make the mash just crumbly, not sloppy.

FOR MOULTING FOWLS—

Mix one tablespoonful of Conkey's Poultry Tonic to each quart of wet or dry mash.

CRATE FATTENING—

Mix 3 lbs. of Conkey's Poultry Tonic in each 100 lbs. of fattening feed or mash. In small quantities use one teaspoonful of Conkey's Poultry Tonic to each quart of fattening feed.

Conkey's Gecco Egg Mash with Y-O is also recommended as it is an excellent balanced ration for layers, containing 20% animal food and is abundantly supplied with A, B and D vitamins. For analysis and ingredients of Conkey's Gecco Egg Mash see page 36.

FEEDING CONKEY'S Y-O

(Yeast with Cod Liver Oil)

Conkey's Y-O can be fed in a special receptacle, just as it comes from the package, but most poultrymen prefer to mix it with mash to insure each fowl getting its portion. It can be mixed with either dry or wet mash. For moist mash mix 1 oz. Conkey's Y-O to 3 lbs. of mash.

BABY CHICKS—Begin to feed Conkey's Y-O at once using a heaping tablespoonful for every 50 chicks each day or mix 2 lbs. in every 100 lbs. of mash.

GROWING CHICKS—Feed 2% to each 100 lbs. of mash.

PULLETS—1 heaping teaspoonful to every 20 birds, or 1½ lbs. in 100 lbs. of mash.

LAYING HENS, BREEDING BIRDS—Mix 2 lbs. Conkey's Y-O in each 100 lbs. of mash.

AMOUNT OF Y-O NEEDED

BABY CHICKS 1 TO 4 WEEKS 2%

No. Birds	Amount Needed	Size to Buy	Cost Per Bird	No. Birds	Amount Needed	Size to Buy	Cost Per Bird
25	¾ lb.	1 lb. pkg.	1 7/10c	500	15 lb.	25 lb. drum	9/10c
50	1½ lb.	2 lb. pkg.	1 4/10c	1000	30 lb.	50 lb. drum	8/10c
100	3 lb.	5 lb. pkg.	1 2/10c	2000	60 lb.	100 lb. drum	7/10c
300	9 lb.	2-5 lb. pkg.	1 2/10c				

CHICKS 4 TO 10 WEEKS 2%

25	1 lb.	1 lb. pkg.	2 2/10c	500	20 lb.	25 lb. drum	1 2/10c
50	2 lb.	2 lb. pkg.	2c	1000	40 lb.	50 lb. drum	1 1/10c
100	4 lb.	5 lb. pkg.	1 6/10c	2000	80 lb.	100 lb. drum	9/10c
300	12 lb.	2-5 lb. pkg.	1 6/10c				

GROWING STOCK 10 TO 20 WEEKS 2%

25	7½ lb.	2-5 lb. pkg.	12c	100	30 lb.	50 lb. drum	8c
50	15 lb.	25 lb. drum	9c	300	90 lb.	100 lb. drum	6 7/10c

FOR HENS—FOR 30 DAYS 2%

15	1 lb.	1 lb. pkg.	3 7/10c	300	20 lb.	25 lb. drum	2c
25	1¾ lb.	2 lb. pkg.	3 3/10c	500	33⅓ lb.	50 lb. drum	1 9/10c
50	3⅓ lb.	5 lb. pkg.	2 7/10c	1000	66⅔ lb.	100 lb. drum	1 5/10c
100	6⅔ lb.	2-5 lb. pkg.	2 7/10c				

IT IS CHEAPER TO BUY A SIX MONTHS' SUPPLY

Prior to and during the breeding season, mature pullets and hens should be fed 2% of Y-O. Thereafter 1½% is sufficient to maintain production, vitality and feather growth.

Amount of Y-O Needed
(Nov. 1st to May 1st)

Flock of	50 hens	20 lbs.
Flock of	100 hens	40 lbs.
Flock of	300 hens	120 lbs.
Flock of	500 hens	200 lbs.
Flock of	1000 hens	400 lbs.

Amount of Y-O Needed
(May 1st to Nov. 1st)

Flock of	50 hens	15 lbs.
Flock of	100 hens	30 lbs.
Flock of	300 hens	90 lbs.
Flock of	500 hens	150 lbs.
Flock of	1000 hens	300 lbs.

Total Amount
Needed for 1 Year

35 lbs.
70 lbs.
210 lbs.
350 lbs.
700 lbs.

1c worth of Y-O will feed one hen 22 days. One extra egg will pay the cost and make a profit.

FOR STOCK

(These quantities can be increased judiciously during Winter feeding)

FATTENING CALVES—1 to 8 weeks. 1 tablespoonful daily.

MILCH COWS—1 tablespoonful twice daily.

BREEDING ANIMALS—Cows: 1 tablespoonful daily

HORSES—2 tablespoonfuls daily mixed with the grains.

SWINE—1 tablespoonful daily

PIGS—½ teaspoonful daily, after weaning and up to 100 pounds.

FOXES—1 to 2 teaspoonfuls daily or 3 to 5% of the ration.

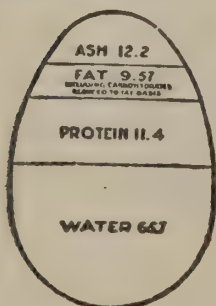
RABBITS—1 to 2 teaspoonfuls or 3 to 5% of the ration.

(See inside front and back covers)

KEEP A FLOCK PRODUCTION RECORD—Study your pullets and hens
This chart will help you see how your averages compare from month to month

Month	75 eggs per bird	134 eggs per bird	160 eggs per bird	213 eggs per bird	Your pullets	Your hens	Average pull. eggs to date	Average hen eggs to date
November	1.0	3.5	5.0	16.7				
December	1.4	4.8	8.0	19.9				
January	6.8	6.5	10.0	17.8				
February	12.4	10.2	13.0	16.0				
March	10.4	16.3	17.0	21.2				
April	10.0	18.3	21.0	23.3				
May	9.7	17.2	20.2	22.3				
June	7.9	14.4	18.0	19.5				
July	6.3	13.9	16.0	19.0				
August	6.4	12.8	14.0	16.4				
September	2.3	10.1	11.0	14.7				
October	0.0	6.0	7.0	6.6				
Total	75.0	134.0	160.0	213.4				

NOTE—In the above chart space is provided each month to record the average number of eggs laid per bird—with both pullets and hens—and to record the average number of eggs laid per bird to date. You should get these averages off of your daily egg record sheet on the last day of each month. Keeping records on the flock tells you at a glance what your flock is doing and will enable you to know instantly if anything goes wrong with the birds. Write us for a daily egg record card.



WHAT AN EGG CONTAINS—Note the large amount of water shown in the analysis in the picture. Water is your cheapest egg-making material—give hens plenty of it. Eggs have definite chemical ingredients and proportions. To make an egg, therefore, a hen must have proper ingredients balanced in the necessary proportions. If any single ingredient which the hen needs is missing, she simply does not lay. Many hens not laying are simply waiting for a good balanced mash like Conkey's or the

addition to their ration of vitamins A, B and D. Feed Conkey's Y-O (yeast with cod liver oil).

MISCELLANEOUS POINTERS

KEEP FEED AND WATER CLEAN—Throughout this book various utensils for feeding and watering are suggested. All are based upon up-to-date practice. Some methods include various devices for keeping feed and water free from contamination. Others seem to ignore this vital feature. At this point we must emphasize the grave necessity of keeping feed and water free from filth. Open hoppers and fountains are one of the greatest sources of disease epidemics. It should be your constant endeavor, therefore, to overcome this difficulty. Watch methods you are using, study any suggested, always with this thought in view—do they really keep the feed and water clean?

KEEP AN EGG RECORD—We advise every poultry raiser to keep a record of the number of eggs obtained from his birds, and also all other information regarding prices of feed, profits obtained, etc. Raisers of back-yard flocks especially will be surprised to find what just a few hens are worth in producing eggs, meat and cash profits. Ask any Conkey dealer for a "Conkey Egg Record," or send direct to The G. E. Conkey Company, Cleveland, Ohio, for one, which will be mailed free.

PRESERVING EGGS—If you have a surplus of eggs in the spring or summer, you will find it entirely practical and profitable to preserve your surplus for winter use. Several methods are good. If interested, write The G. E. Conkey Co., Cleveland, Ohio, for special Bulletin on preserving eggs.

MANAGING THE ROOSTER—After hatching is over, there is no longer any reason for keeping the males with the hens, and many reasons for eliminating them. Some people imagine that hens lay more eggs if roosters are allowed to run with the flock but this is a mistake. Hens actually lay more eggs if the males are not allowed with them and the eggs are better for marketing because infertile. Male birds should be separated from the hens as soon as the breeding season is over. Hens should rest during the molt, and the cock birds should rest also.

CAPON RAISING—Poultry raisers should consider this profitable way of disposing of surplus cockerels. There is a good demand for capons and the operation is easy to perform. There is no reason why any poultryman should not be able to develop a good local market for capons. It costs no more to feed a capon than a rooster, but ordinarily the tender, palatable flesh of the capon will bring twice as much as a rooster. Send for free Bulletin.

PREPARING POULTRY FOR EXHIBITION—Every poultry raiser should exhibit his best birds at his local poultry show. There is no better way of finding out the quality of birds you are raising—or of discovering mistakes. Birds should be conditioned properly before being exhibited, otherwise really good specimens may lose to inferior birds. If really interested write us for special free Bulletin.

TURKEYS, GEESE, DUCKS, PHEASANTS—If interested in feeding, care and management of fowls other than chickens, please write us what you are interested in, and special Conkey bulletins will be sent to you free of charge. In this connection, remember, Conkey's Buttermilk Starting Feed is not used for chickens exclusively, but gives just as successful results with all self-feeding baby fowls. Get detailed information by writing for special Bulletin.

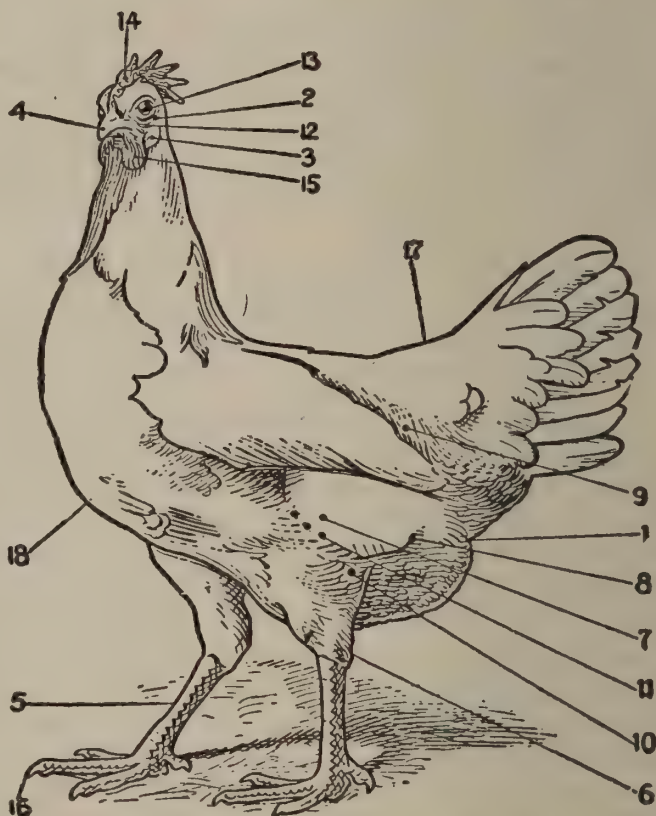
PIGEONS—Raising squabs is profitable if one gets the right kind of stock, prepares his houses and flies along approved lines, feeds properly and gives careful attention to management. Conkey's Pigeon Feed is a favorite with fanciers. If you are really interested in pigeon problems, write us for special Bulletin.

POULTRY CULLING

CULLING poultry should really be practiced every month in the year. There are always a few birds the owner could remove with profit and sell each month, which would save feed and add to the flock income. With the use of a catching coop the whole flock can be gone over quickly and the culls removed with ease. If you do not cull monthly, at least cull during each of the three months, July, August and September and sell all birds that cease to lay or show signs of low production. In the average flock only one bird out of three is worth carrying through another year.

COLOR CHANGES—When a hen is not laying she deposits fat on her body. This fat contains a yellow pigment (in yellow skinned varieties) which gives a yellow color to the legs, beak, skin, etc. As soon as the hen begins to produce eggs, this yellow pigment is diverted from the body and is used in coloring the egg yolk. As long as the hen produces eggs the pigment is all used by the yolk, and none of it finds its way to the body. When she stops laying this pigment is again deposited with the body fat.

Pigment deposited in the body during the hen's rest period gradually fades or bleaches out during production, leaving the body color a bluish white or pink. This process of fading follows a certain definite course, always in the following order: First, the vent; second, the eye rings and ear lobes; third, the beak; and lastly, the shanks.



CULLING NOMENCLATURE

1. Vent; 2. Eye-Ring; 3. Ear Lobe; 4. Beak; 5. Shank; 6. Hock Joint; 7. Abdomen; 8. Pubic or "Pin" Bones (Rear of Pelvic Arch); 9. Pelvic Arch; 10. Rear of Keel or Breast Bone; 11. Side; 12. Face; 13. Eye; 14. Comb; 15. Wattles; 16. Toe-Nails; 17. Rump; 18. Front End of Breast Bone

NOTE—Material for this article was furnished by E. L. Dakan, Professor of Poultry Husbandry, of Ohio State University. Mr. Dakan is an authority on this subject, having given culling and selection of birds for utility production many years study, as well as practical application in his everyday work of teaching Ohio farmers how to improve their flocks. The pictures were drawn from photographs furnished by the U. S. Bureau of Animal Husbandry and the College of Agriculture, Ohio State University, Columbus, Ohio.

The kind of feed eaten affects the period necessary for the color to fade, as the yellow pigment is derived from the grain and the green food. Hens fed yellow corn and plenty of green food have a larger supply of yellow stored in their bodies than hens fed on white corn, with no green food. The more yellow pigment stored, the longer the time required for bleaching. With these facts in mind, it is possible to select the hens that have been continuous, consistent layers; or to cull those that have just begun laying, or the ones that have laid only a few eggs.



Three Fingers Between Pelvic Bones

little more slowly than the vent. Therefore, bleached or white eye rings indicate a longer production than a bleached vent.

With white lobed varieties the ear lobes show bleaching next, and it indicates a still longer period of production than white vent and white eye rings.

BEAK COLOR—The beak loses its color before the shanks. A white beak indicates the hen has been producing eggs for from six weeks to two months. Color leaves at the base first and gradually disappears until it finally leaves even the front part of the upper beak. The lower beak bleaches faster than the upper. Observe the lower beak carefully when the upper is covered with black or brown horn—as in Rocks and Reds.



Two-Finger Measure of Digestive Capacity

SHANK COLOR—Shanks are the last to lose the yellow color and for this reason are the surest indication of long, continuous production. It takes from 4 to 5 months for the shanks to become white after the hen begins producing eggs. Color leaves the front of the shanks first and gradually fades from the scales on the back as the length of the laying period increases.

VENT—A large, open, moist and soft vent indicates a laying hen, while the vent of a non-laying hen is small, closed, dry and puckered.

COMB—Laying hens have large, full and bright combs and wattles, while the comb and wattles of a non-laying hen are dry and hard, often covered with scales, and are pale in color.

ABDOMEN—Covering the body cavity of the laying

VENT, EYE RING AND EAR LOBE COLOR—First to lose the yellow color after production starts is the vent. This is due to the fact that those parts of the body where the blood circulates the greatest, fade first. A white or pink vent of a yellow skinned bird indicates she is laying.

The eye rings, which are in the inner edge of the eye lid, bleach out a



**"Two-Fingers"
Pelvic Spread**

hen is soft and pliable fat, while the skin is smooth and velvety. The abdomen of a non-laying hen is dry and hard. In heavy hens—not laying—the abdomen may consist largely of a chunk of fat.

PELVIC BONES—The pelvic or “pin” bones of a laying hen are straight and flexible, with very little or no fat around them. They are spread far enough apart to permit the passage of the egg. No definite measurement can be given as the spread varies with the individual and the breed. A hen that is laying will show a greater spread than the one not laying, and the bones of a non-laying hen are thick, stiff and blunt with the ends bent in.



Judging Capacity with One Hand

DISTANCE FROM PELVIC BONES TO KEEL BONES

High producing hens consume more food than low producers. In order to digest this food the intestines of a laying hen are larger than one not laying. When laying, the ovary and oviduct are greatly enlarged and require more room, consequently the body increases in depth. Note the distance from pin bones to end of keel bone. Increase in size of the body cavity comes through the dropping of the keel bone. By measuring the distance from the pin bones to the keel bone an idea can be formed as to whether the hen is in laying condition or not. As a general rule, a hen that measures less than 3 fingers is not laying or is a poor layer, because such a hen lacks the capacity for handling a large amount of feed. The hen that shows the greater body depth is to be chosen as a good layer if she shows



Four Fingers' Depth

the other marks of egg production.

BODY DEPTH—Hens having deep bodies when measured from the center of the back to the end of the breast bone are best. A good hen is flat sided and has a long, prominent breast. This method of determining capacity is preferred to that of measuring the distance from the pin bones to the keel bone, because the latter merely tells if the bird is laying at the time.



Measuring Back Fowl of Good Width

BODY WIDTH—High producing hens have wide backs over the heart and carry this width well back to the tail. A wide back at the rump or just back of the hips is especially desirable.

THE MOLT—Most hens stop laying when they begin to molt. Since the molting period covers many weeks it is advisable to sell the early molters. Early molting hens take all fall and winter as a vacation for changing their plumage. The consistent layer molts late and grows her new plumage rapidly. As the time of the molt is the best indication of the last year's performance this is very important.

Hens that molt early, under normal conditions, will not lay as many winter eggs as hens that molt late. Neither will



A Narrow-Back Bird

they begin laying any earlier in the spring. As a rule, the first hens in a flock to molt should be sold and the last to molt should be kept for breeding purposes.

Do not overlook the fact that the birds may be thrown into an early molt by sudden starving while laying heavily; by irregular feeding; by roosting in a poorly ventilated house or in any way that tends suddenly to check egg production. Avoid sudden changes of any kind. If the pullets are hatched early and properly cared for they should be laying early in the fall, and thus the egg production kept up throughout the entire season.



Position of Thumbs in Measuring Body Depth

WING FEATHERS—Originally hens depended upon their wings for protection from enemies. In order that birds may be able to fly at all times Nature provides that they molt the least important feathers first. That is why feathers are dropped first from the neck, then from the body and lastly from the wings. The ten large feathers of the wing—called primary feathers—are dropped one at a time at intervals of about two weeks. They are molted from the inside of the wing out. A small axial feather separates the primary and secondary feathers. See Figure A, p. 46.

From 1 to 10 is the order in which the primary feathers are molted. When No. 1 is dropped the hen will lose about two weeks' production and so on with each primary feather, which means a total of about 20 weeks before all these feathers are molted. This hen has a full new wing, indicating that she was an early molter and had been out of production several months.

In Figure B (p. 46) the hen was in laying condition December 20th. Her wing clearly shows that she molted feathers No. 1 to 5, and that feathers 6 to 10 have not been molted. High producing hens rarely go through a complete wing molt at one time. It takes at least six weeks for a primary feather to mature. As all new feathers in this wing are mature, we know that this hen has not molted one for six weeks.

Figure C shows the wing of a late molting, high producing hen December 20th. Feather "A" is the axial feather. Feathers 1 and 2 are mature new feathers at least six weeks old, indicating that the hen took a rest at some time during the early fall. Feathers 3, 4 and 5 are new feathers, just coming in. Feather six is not visible, as it is just coming through. This hen is resting while these new feathers are growing. Feathers 7, 8, 9 and 10 are old feathers and will probably not be molted this season. Note how ragged they are. This hen was an unusually good producer.



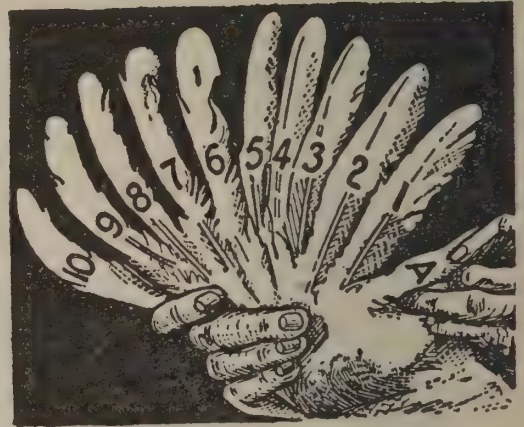
Position of Thumbs in Judging Body Depth



A. All New Feathers

CULL THE POOREST, KEEP THE BEST—Cull in July, August, and September the hens that show:

- (I) Well developed molting with distinctly contracted comb and wattles.
- (II) Dry, contracted abdomen, with a dry, wrinkled, puckered vent.
- (III) Yellow shanks and beak.



B. Half of Feathers—1, 2, 3, 4, 5—Molted

Test A will usually be sufficient, but it should be combined with B and C for greater accuracy. Test C is merely an indication of past performance, and should be combined with test A for accuracy.

If the poultryman wishes to cull everything but the very best, the selection should be repeated in October and November.



C. Late Molter. Only Two New Full Grown Feathers

Keep those hens showing:

- 1. Incomplete molt, red comb, bright eye.
- 2. Well spread pelvic bones, good depth from pelvic bones to keel bone, and a soft, pliable abdomen.
- 3. Pale, faded shanks and beak, white vent, eye rings, and ear lobes.

To make the selection with greatest accuracy, use all these tests.

Careful attention to the preceding pages will enable any poultry raiser to successfully manage a flock. With proper housing, sanitation and feeding, poultry will thrive and disease be kept to the minimum. Prevention is better than cure. But every poultryman should be prepared at all times for disease, and treat it properly at the very first indication. See the following pages, and remember in times of trouble Conkey is ready to help you.



POULTRY DISEASES AND THEIR TREATMENT

SINCE foul dirt, dampness and absence of sunlight contribute to disease, the first care is to build proper poultry houses and then disinfect often with Conkey's Noxicide. Select stock carefully, cull frequently and feed regularly. This will insure constitutional vigor and proper development of your birds, and they will be better able to withstand disease. Conkey provides two helps for disease problems, a disinfectant to remove the cause and destroy the germs, and a tonic to restore the bird's vitality.

WATCH FOR THE FIRST SYMPTOM OF ILLNESS—and from your "Conkey Corner" take the remedy needed. Be prepared by having your medicine shelf always supplied. Prompt care at the beginning will save many a valuable fowl and sometimes the whole flock.

KEEP THIS BOOK WHERE YOU CAN FREQUENTLY REFER TO IT—Read it carefully. It will show you what to do to safeguard yourself against the loss that is sure to follow unchecked disease.

NEVER GIVE A SICK BIRD GRAIN OR OTHER HARD FOOD—Crusts of bread or toasted bread, softened with warm milk, is good. In bowel troubles, let them have chopped onion if they can take it themselves. Charcoal is also good. With very sick birds, give warm milk with a medicine dropper. If feverish, give frequently a drink of cool (not cold) water, using the medicine dropper.

A package of Conkey's Buttermilk Starting Feed with Y-O in which Conkey's Poultry Tonic has been mixed is a good thing to include on your emergency shelf. The Starting Feed, being a mash for delicate organs, is just the thing for convalescent patients. As strength returns, gradually change to regular feed.

ROUP (CONTAGIOUS CATARRH)—This is probably the most common of contagious diseases affecting fowls. Lack of cleanliness, poor ventilation, and neglect to disinfect regularly are usually responsible for this disease. Regular disinfection and preventive measures, especially during cold, wet, rainy weather, is the safest method.

Symptoms—Nostrils closed. Running at the nose. Face swollen, eyes watery. Comb pale. Whistle or sneeze when breathing. Breath has catarrhal odor.

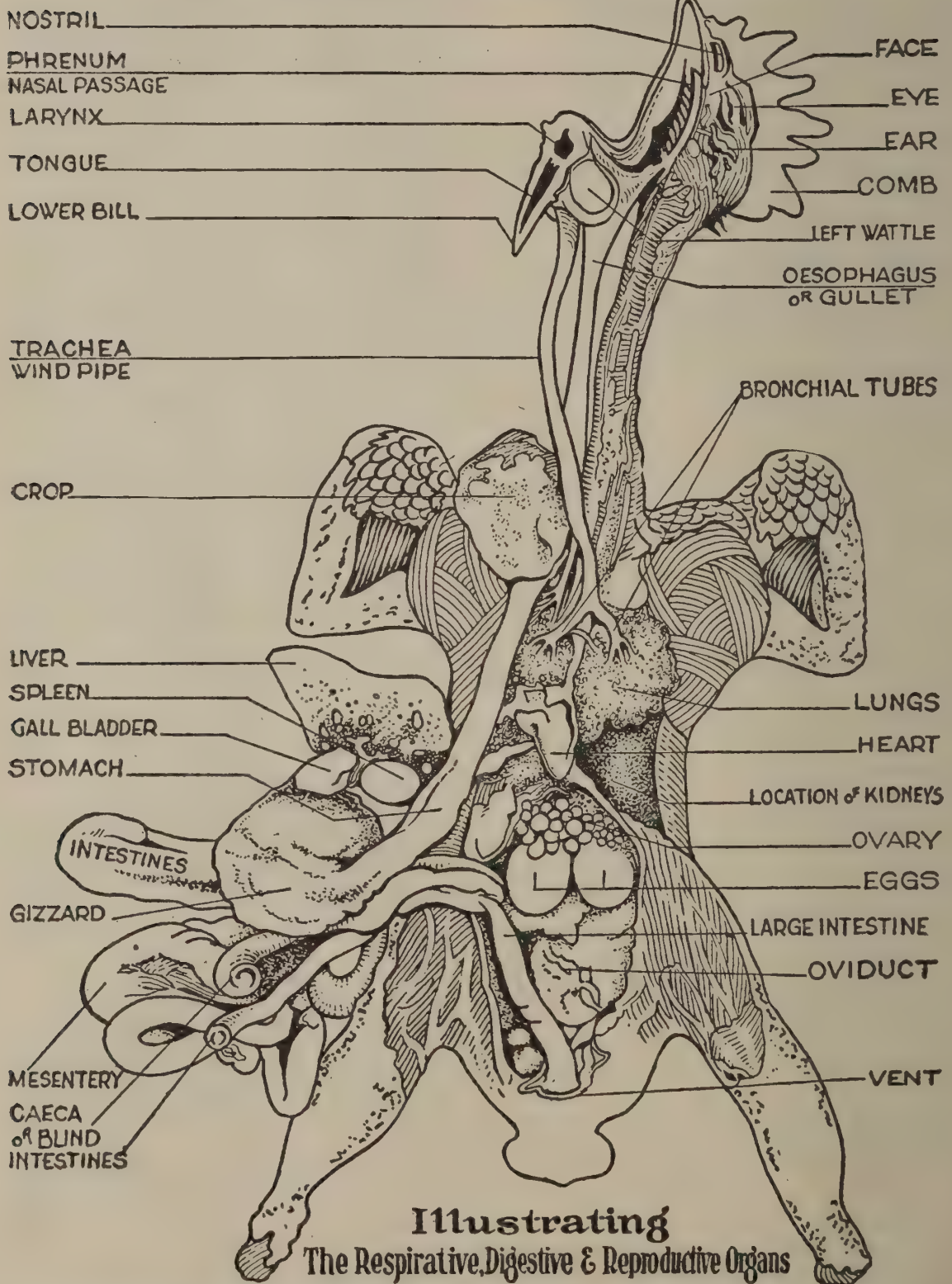
Treatment—Remove all sick birds and give each a Conkey Poultry Pill, formerly called Conkey's Roup Pill. Use Conkey's Balmo—formerly called Canker Special—in eyes and nose three to four times daily to keep the air passages open. Keep Conkey's Old Reliable Powder—formerly called Conkey's Roup



A Case of Roup

Have a Conkey Corner in Your Poultry House

Conkey's Anatomical Chart of The Domestic Fowl



Illustrating
The Respirative, Digestive & Reproductive Organs

Copyright 1927 By The G. E. Conkey Co.

Conkey's Poultry Book

This Chart with Disease Pointers on back will be mailed for 4 cents in stamps.

Size of Chart 10½ x 14 Inches

Remedy—in the drinking water. Clean and disinfect the poultry house with Nox-i-cide and look well to the ventilation. Mix Conkey's Poultry Tonic in the mash. Send for Conkey's Special Bulletin on Roup and related diseases.

BRONCHITIS—Bronchitis is an inflammation of the mucous membrane of the trachea and bronchial tubes and may be induced by a catarrhal condition of the head, or by the same causes which produce colds. Exposure to dampness, cold, drafts of cold air, and too sudden or extreme changes of temperature, are the most frequent causes.

Symptoms—If the bird "rattles" or produces a whistling sound when breathing (not wheeze or sneeze—as in roup), it is likely to be Bronchitis—and immediate treatment is necessary. A croupy noise when breathing may also be a symptom. Usually the eyes are very bright and the comb a brilliant red, due to effort to breathe. If the fowl rattles, the healthier it looks the more it needs attention, and unless this is given, it may last but a few hours.

Treatment—Put the bird in a warm, dry, comfortable place. Allow fresh air, but let it be warm air. Give fresh drinking water, cool, not cold. Drop one drop of Conkey's Balmo—formerly called Canker Special—in the mouth, one drop of Balmo into cleft in the upper part of mouth twice a day and give a Conkey's Poultry Pill—formerly called Roup Pill—morning and night. Put Conkey's Old Reliable Powder—formerly called Roup Remedy—in the drinking water for all the birds and disinfect with Conkey's Nox-i-cide to protect exposed fowls. Feed twice daily with soft warm feed.

SIMPLE CATARRH—Catarrh is an aggravated cold, especially affecting the head.

Symptoms—A gummy deposit around and in the nostrils, slight froth in corner of eye, and frequent shaking of head.

Treatment—Treat as for Roup, using Conkey's Poultry Pills—formerly called Roup Pills.

MANSON'S EYE WORM—In the South this parasitic disease of the eye has become rather common. The worms are white, small and threadlike, a little over one-half inch long and with the thickness of a fine sewing needle, being thickest in the middle and tapering gradually toward each end.

Symptoms—Uneasiness and scratching at the eyes. An abundant secretion of tears; eye-lids become stuck together and white, cheesy matter gathers beneath them. Later, the entire eyeball is destroyed. When this stage is reached the worms will not be found in the eye; the nostrils may also become affected and obstructed. In severe cases the bird may die.

Treatment—Irrigate the eye with Conkey's Balmo—formerly called Canker Special. Repeat the treatment, and the worms will struggle to escape so that they can be lifted out in a wiggling mass. Use small forceps with blunt points. Disinfect drinking and feed vessels with Conkey's Nox-i-cide and soak the ground around the coops with water or suds to which the Nox-i-cide has been added. Continue using Balmo in the eye until all inflammation is removed.

PIP—Pip is the hardening of the mucous membrane of the tongue, caused by constant forced breathing through the mouth. Do not remove the tip. Clean the



Cankers in Mouth



How to Give a Pill

mouth daily with cotton dipped in Balmo—formerly called Canker Special. The hardened condition should soon disappear. Never try to remove the “pip.” It will naturally disappear if treated properly.

TUBERCULOSIS—Tuberculosis is a germ disease and is highly contagious.

Symptoms—Loss of weight, dullness, sleepiness, emaciation, with signs of indigestion, a decided rise in temperature, and—during the last stages—violent diarrhea. Tuberculosis is frequently called “Going Light.” Birds so attacked seldom recover, and treatment is hardly advisable. Kill and burn all birds showing any symptoms. Disinfect with Conkey's Nox-i-cide.

CHOLERA AND CHOLERA-LIKE DISEASES—True Asiatic Cholera seldom shows itself in the fowls in this country, and when it does appear its ravages are so rapid and deadly that cures are seldom made.

Symptoms—Diarrhea; droppings may appear yellowish or vary in color. The fowls develop a fever; eat but little, drink continuously, become sleepy, weak and die.

SOUR CROP—The fermentation may be due to ravenous feeding; or to the taking of soured food or stagnant water; or to too slow digestion, due to absence of grit.

Symptoms—Crop is distended, usually soft, and when manipulated the chick or fowl will belch. Unless prompt action is taken, the poison developed will quickly kill.

Treatment—Follow treatment described below for Crop Bound as far as is necessary. Give a little baking soda in water and do not feed for a day after the crop has become empty. For several days, feed a little moist food in which Conkey's Poultry Tonic has been mixed.

CROP BOUND—Usually caused by digestive disorders. It may result from the fowl eating dry grass, wire grass, straw or leaves, etc., which form into a tangled mass and cannot pass beyond the crop; or it frequently occurs from a paralyzed condition of the crop due to low vitality.

Symptoms—The fowl shows marked signs of distress, crop is hard and greatly distended, and feathers are ruffled.

Treatment—Gently massage the lower end of the crop to loosen the pack. If the pressure relieves the packed condition at this point, let the chicken rest a few minutes, then offer it water. A good drink will often start the natural action of the crop if the lower opening is cleared. Pour a little sweet oil into the fowl's mouth and force it to swallow. Then suspend it by the legs and gently knead the crop until its contents are loosened. Try to remove the mass by working it up the throat and out of the mouth.

Occasionally it is preferable to open the crop. To do this, pluck some of the feathers and take a sharp knife or razor and make a cut an inch long across the crop near the neck. With a button hook remove the grass. Clean the crop thoroughly. Wash with a solution containing Conkey's Nox-i-cide—one-fourth teaspoonful to a pint of water—and sew up the cut with 3 or 4 stitches, first sewing the crop and an equal number of stitches in the skin. Use white silk or cotton thread—each stitch to be tied separately.

Whether the crop has been opened or the food removed through the mouth, the bird should be given some baking soda in water to purify and sweeten the crop. The bird should have a light feed at once—such as milk and eggs beaten up—as it may be in a practically starving condition. Feed as for Sour Crop.

BLACKHEAD—Blackhead is a parasitic disease which first attacks the caeca (the two blind pouches of the intestines) and later affects the liver. It is most prevalent in turkeys. It is spread from diseased birds, in the droppings and contaminated drinking water and food.

Turkeys should not be kept on the same ground with chickens nor allowed to run with them, for often many chickens are affected with the parasite and are a constant cause of contagion, although they individually do not suffer from the disease. For full details, send for Conkey's Bulletin No. 103-C on Raising Turkeys.

GASTRITIS—This is inflammation of the stomach (see Anatomical Chart, Page 48) due to eating mouldy, poisonous or indigestible foreign substances, or to constant overfeeding, lack of grit, or drinking impure water.

Symptoms—Inflammation of the crop, or intermittent diarrhea and constipation, loss of appetite, general debility and increased temperature.

Treatment—Give birds more range and a change in diet. Give boiled rice water* to drink. Add one-fourth teaspoonful baking soda to each quart of drinking water. Give a dose of Epsom Salts. Feed boiled rice or boiled barley and keep on short rations for several days. Milk given three times daily will often help a weak fowl over the crisis. When the bird is able to eat mash add the Poultry Tonic.

LIMBERNECK—This is simply a symptom of ptomaine poisoning. It is a very serious ailment, demanding immediate treatment. It can only be cured in the early stages. Limberneck is generally caused by eating putrified animal matter. If the premises are searched some dead animal or fowl upon which the birds have been feasting will likely be found. Eating spoiled ground bone, putrid animal food and maggots that are feeding upon meat will cause this trouble.

Symptoms—The neck is so limber the bird cannot hold its head up, and it staggers and trips as it tries to walk. The fluff will usually be soiled with a thin, yellowish mucus, and the bird constantly tries to throw off the contents of the tortured bowels. Often blood will ooze from the vent.

Treatment—The enema is very effective for Limberneck. It relieves the pressure on the bowels and helps the natural movement of the gizzard and intestines which are paralyzed by the poison. Give frequent drinks of cool water or milk. Continue the enema each day until the bowels show a normal condition. Give one-half teaspoonful of Epsom Salts in water or 3 or 4 teaspoonfuls of Castor Oil.

POISONING—Many fowls meet death through careless distribution of insect killers, salt-brine, stale meat, lye, fertilizers, copperas, phosphorous from matches, rat poison, paint left in old cans, Paris Green, etc.

Symptoms—Trembling convulsions, and drowsiness. The fowl seeks a dark place and draws its head close to the body.

Treatment—Empty the crop—see Crop Bound. Where poison is due to salt, lye or fertilizers which contain nitrate of soda, give as drinks strong coffee, or flaxseed tea, slippery elm, or similar mucilaginous liquids. Where poisoning is due to copper, zinc or lead, give white of egg in liberal quantities. For phosphorous, give magnesia and afterwards flaxseed tea.

DISEASES OF THE LIVER—The principal diseases are Congestion of the Liver, Inflammation of the Liver, Atrophy, or Wasting of the Liver, and Fatty Degeneration of the Liver. Causes of Liver troubles are due chiefly to lack of exercise and over-feeding, also to foods which are too rich, or too heavy in their proportions of starch and fat, such as in corn.

Symptoms—Symptoms are often misleading and slow to appear. The comb and wattles may show lack of color, gradually changing to dark red or purple; loss of appetite; fever and sluggishness, the abdomen soft and swollen. In Jaundice, the skin takes on a yellowish hue; also indicated in the comb and wattles. Often there is a watery diarrhea, dark in color, gradually changing to a yellow cast.

Treatment—Give occasional small doses of Epsom Salts, after which build up on soft food. Clean up the premises, disinfect with Nox-i-cide. Introduce Poultry Tonic into the feed to prevent further trouble.

CHICKEN POX—SOREHEAD—Chicken Pox attacks chickens, turkeys, pigeons and geese, but principally chickens and pigeons. It is especially noticeable in damp, warm weather, developing in houses that are not kept clean and dry. It is very contagious.

Symptoms—Brown and rough scabby warts on the comb, lobes and face, occasionally on various parts of the body. When broken they discharge a thick yellow liquid.

Treatment—Isolate all affected birds, and thoroughly disinfect the houses, etc., with Nox-i-cide. Then dry out by opening doors and windows. Apply Conkey's Salvo—formerly called Sorehead Remedy—daily to the affected parts. Results are hastened if the warty growths are softened with warm water and soap, and the tops of the warts are gently removed with a blunt instrument, before applying the salve. Roup often accompanies Sorehead, also. In such outbreaks use Conkey's Balmo—formerly called Conkey's Cancer Special. Directions, page 47.

BUMBLE FOOT AND FOOT ABSCESS—This may be a stone bruise, caused by the fowl jumping from too high roosts, or by hard floors not properly covered with litter, etc., or a splinter or other source of infection.

Symptoms—A hard, calloused area on the bottom of the foot, or a soft swelling or abscess. In either case, the part will become inflamed.

If the foot is calloused, use a good collodian paint or Corn Solvent. As the edges loosen, continue to treat, working the collodian well in around the edge of the callous. When it comes off, paint the spot with iodine, allow to dry and then pack with oakum, using an adhesive bandage to keep in place. If there is a swelling or abscess, apply a poultice to draw to a head, and when ready lance and treat as a boil or carbuncle on the human patient. It should be allowed to drain until the inner tissues heal, keeping it free from infection by removal of pus, washing with Conkey's Nox-i-cide, two per cent solution, and packing with Conkey's Salvo.

Bind the foot so that the fowl cannot dislodge the bandage, and place the bird on a bed of straw—do not allow it to roost. Repack daily with the ointment until the swelling has gone down.

WIND PUFF (Air Blister)—Appears mostly in chicks. Cut out a small piece of the skin to release air. Paint with iodine to prevent infection.

BAGGING DOWN—An enlarged and over fat condition of the posterior part of the body. It is usually caused by too heavy feeding or the feeding of corn and other fatty foods.

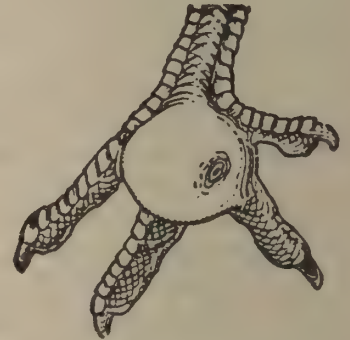
Treatment—Change diet to a balanced ration, such as Conkey's Gecco Egg Mash. Feed green food and compel exercise. Give the hens a laxative, and keep Poultry Tonic mixed in the mash.

VENT GLEET—is a contagious catarrh of the cloaca, or lower portion of the bowels, and is usually transmitted from fowl to fowl in the act of copulation.

Symptoms—Traces of blood on the egg, frequent attempts and actual passage of excrement. The membranes are red, dry and swollen. A thin watery discharge

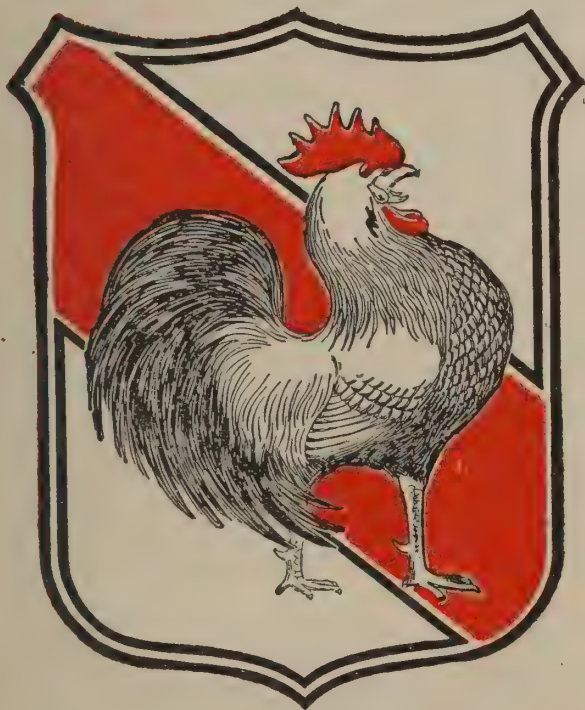


Chicken Pox. Showing Warty Scabs



Bumble Foot

POULTRY SUPPLIES



E

Sold by

Use "Moe's Line" of Good Poultry Supplies
for More Eggs and Better Poultry

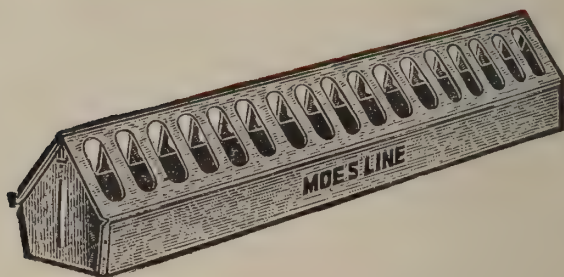
Moe's Baby Chick Feeders



Round feeders for baby chicks. Also used for water and milk. Tops fit snugly, yet are easily removed for filling and cleaning.

No. 11.	Galvanized, 8 holes; diam., 6 in	Each	\$0.10
No. 12.	Galvanized, 12 holes; diam., 8 in	Each	.20
No. 131.	Bright Tin, 8 holes; diam., 6 in	Each	.15
No. 132.	Bright Tin, 12 holes; diam., 8 in	Each	.30

Intermediate Size Feeder



Designed for growing fowl and full-grown birds. Has a capacity of 12 quarts of feed, with 34 feeder holes in the hinged cover. Easy to clean. Length 32 in., width 8 in. Feeder holes have smooth edges, and exactly the right size and shape to prevent waste.

No. 154.	Galvanized Steel	Each	\$1.20
No. 155.	Heavy Tin Plate (for Buttermilk) . .	Each	1.75

Moe's Eclipse Feeders



For chicks and growing stock. One-piece pan and top. No seams, rivets or solder used. Sliding Top, easy to fill and clean.

Galvanized Steel

No. 27. Length, 10 in. with 10 holes.....Each \$0.20

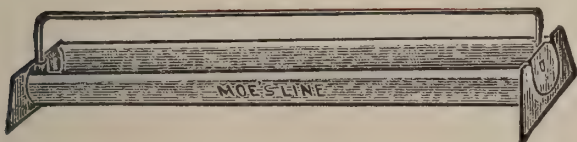
No. 28. Length, 20 in. with 20 holes.....Each .30

Bright Tin (for Buttermilk)

No. 137. Length, 10 in. with 10 holes.....Each .25

No. 138. Length, 20 in. with 20 holes.....Each .35

Dixie Feeders



The deep, half-round troughs have a turned-in flange to prevent waste. Easy to fill and clean.

The wire top guard keeps the chicks out, and is adjustable, so it can be raised as the chicks grow in size.

Galvanized Steel

No. 460. Length, 18 in.....Each \$0.20

No. 462. Length, 30 in.....Each .30

Five-Foot Feeder



Heavy galvanized steel, well braced. Heavy steel legs. The trough has wide turned-in flanges to prevent waste. Tilting Top Cover to prevent roosting and this cover swings out of the way for refilling and cleaning.

No. 370. Length of feeder, 5 ft.; height, 15 in.; width, 8 in.; depth, 5 in.....Each \$3.75

Moe's Large Capacity Feeders



The finest and most popular feeders made, for either small or large flocks. Smooth feeder holes just the right size and shape, and in just the correct position to give the chickens easy access to the feed and yet prevent needless waste. Two sizes.

No. 140. Capacity, 10 quarts; length, 21 in.; 32 feeder holes. Each **\$1.00**

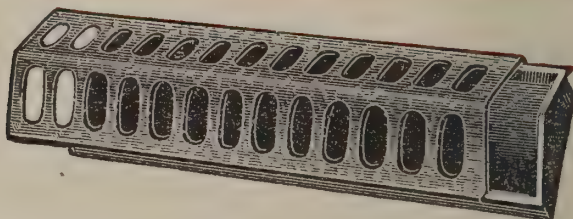
No. 141. Capacity, 17 quarts; length, 35 in.; 54 feeder holes. Each **1.60**

Tilting Top Feeder



No. 141-T. The same as No. 141 (shown above), but has a **Tilting or Swinging Top** so that chickens cannot perch on it. Capacity, 17 quarts; length, 35 in.; 54 feeder holes. Each **\$1.75**

Double Feeding Troughs



Galvanized steel. Feeder holes have smooth turned-over edges to prevent injury to the chicks. Sliding top.

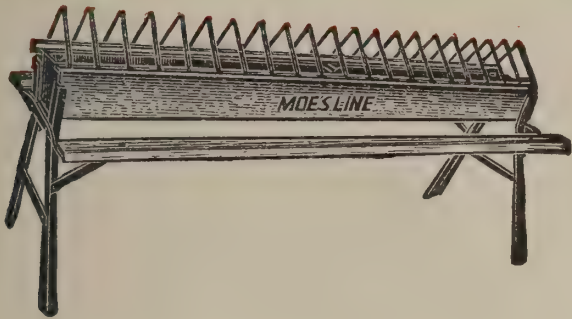
No. 58. Length, 12 in. with 18 feeder holes. . Each **\$0.25**

No. 59. Length, 18 in. with 26 feeder holes. . Each **.40**

No. 60. Length, 24 in. with 36 feeder holes. . Each **.50**

No. 76. Length, 36 in. with 52 feeder holes. . Each **.65**

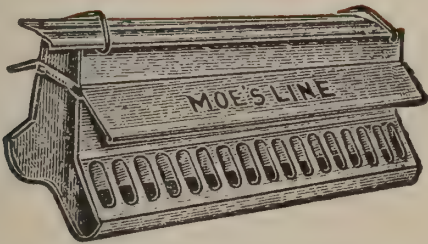
Moe's Five-Foot Wire Guard Feeder



Made of extra heavy galvanized steel, and holds 32 quarts of feed. Length of trough 5 ft. with wide turned in flanges on each side to prevent waste. Heavy wire top guards, hinged in one unit, and trough is removable for cleaning. Complete with angle iron stand and wood perches.

- No. 355. Complete with Stand.....Each \$4.75
- No. 356. Trough and Guard, without Stand. .Each 3.00

Big Boy Feeders



Designed for growing stock—three to four week chicks—and up to full-grown fowl. Capacity 75 pounds of dry mash, with large wide feeder openings, smooth rounded edges.

Length, 33 in. with 34 feeder openings.

- No. 160. Without the wide covers.....Each \$3.50
- No. 161. With wide adjustable covers (as shown),
Each 4.25

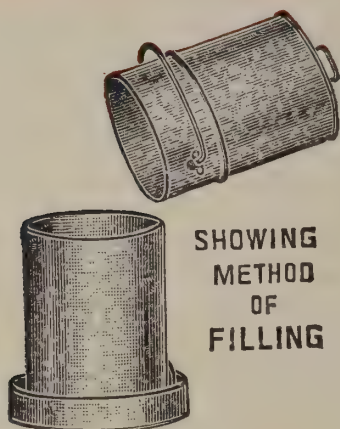
Magazine Feeder



The top magazine is water and air tight, so can be used as a Feeder or Fountain. Adjustable for various feeds. Holds 2 quarts.

- No. 18. Galvanized...Each \$0.50
- No. 139. Heavy Tin
Plate.....Each .65

Moe's Cleanable Top Fill Fountains



SHOWING
METHOD
OF
FILLING



Moe's Top-Fill Fountain, with double walls which keep the water cool in summer and retard freezing in winter. Fills at the top and as easily cleaned as an ordinary pail. Feeds the water automatically, no valves or complicated parts. Heavy galvanized steel, with Round Pan.

No. 33. Capacity, 2 gallons. Each \$2.10

No. 34. Capacity, 4 gallons. Each 2.60

Round Fountain



The round taper shape prevents damage from freezing. Made in two pieces accurately formed. Galvanized steel. Easily filled and cleaned.

No. 19. 1 qt. . Each \$0.25

No. 20. 2 qts. Each .30

No. 24. 1 gal. Each .45

Wall Fountain



A popular fountain, of heavy galvanized steel. Easy to fill and the water feeds automatically. Covered drinking space.

No. 98. 1 gal. . Each \$1.00

No. 99. 2 gals. Each 1.40

Moe's Star Fountain and Feeder

10^c



10^c

Famous Star Fountain for Mason jars. Made of a single piece of rust-resisting metal, no seams or solder. Suitable for feed as well as water. Will fit 1 pint, 1 quart and 2 quart Mason jars.

No. 32. Heavy Terne Plate. (Glass jar not included.) Each \$0.10

No. 133. Bright Tin Plate (for Buttermilk)... Each .10

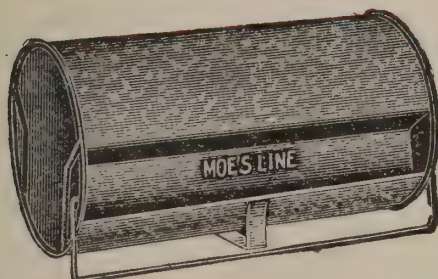


Mason Jar Fountain

Made of rust-resisting metal. No seams or solder, and fits Mason jars, sizes 1 pint, 1 quart and 2 quart.

No. 142. (Glass jar not included)... Each \$0.10

Horizontal Fountain



For baby chicks and growing stock. Heavy galvanized iron, simple and substantial. Water feeds automatically.

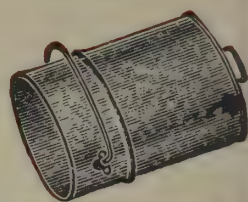
No. 134. Capacity, 1 gallon... Each \$0.60

No. 135. Capacity, 2 gallons... Each .80

Moe's Insulated Top Fill Fountain



Insulated
Walls
Top and
Bottom



SHOWING
METHOD
OF
FILLING

A fine fountain for all seasons. Double walls all around filled with an efficient insulation. Keeps water warm in winter and cool in summer. Top section telescopes snugly over the water container. Easy to fill and clean.

One of the finest and best fountains made. Capacity 4 gals.

No. 54. Cleanable Insulated Fountain Each \$4.50

Gem Chick Fountains



Made with a fluted round pan, shaped so up to 18 chicks can drink at one time without crowding. Galvanized steel and suitable for chicks or grown fowl. Diameter of pan 10 in. May be placed on the floor or hung from the wire top handle.

No. 158. Capacity, 1 gallon . . Each \$0.55

No. 159. Capacity, 2 gallons.. Each .80

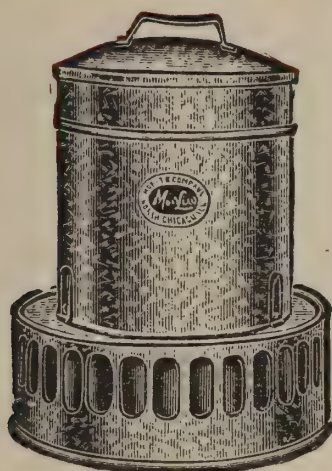
Top-Fill Fountain

An inexpensive cleanable fountain for chicks or grown fowl. Galvanized steel, with top handle and side fastener so can be hung on the wall. Water feeds to the pan automatically. Diameter of pan 11½ in. Capacity of fountain 2 gallons.

No. 40. Top-Fill Cleanable Fountain Each \$1.65



Moe's Peerless Chick Feeder

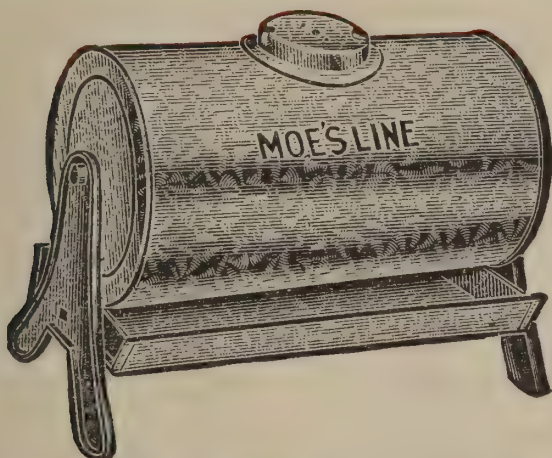


For baby chicks and growing fowl, and suited for either large or small flocks. The hopper is adjustable up or down for different kinds of mash or feed. Thirty chicks can feed at one time and they cannot foul or waste the feed. Two sizes.

No. 192. Capacity, 10 quarts.....Each \$1.35

No. 193. Capacity, 18 quarts.....Each 1.75

Ten-Gallon Swinging Fountain



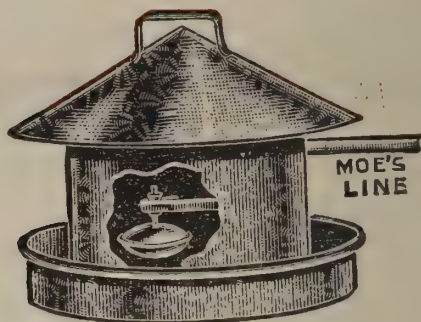
A practical cleanable fountain with a large capacity. The tank swings on pivots, and when inverted the water flows automatically to the drinking pan.

Capacity, 10 gallons; filled through the 5 in. cleaner opening at the top. This opening will admit the hand or brush, so it can easily be kept clean inside.

Size of pan, 12 x 22 in. All of heavy galvanized steel.

No. 43. Moe's Swinging Fountain.....Each \$4.00

Automatic Poultry Fountain



A complete automatic fountain that will care for a large number of chicks in a clean sanitary manner. The automatic valve regulates the flow of water to the pan and is suitable for either high or low water pressure. Valve is threaded for $\frac{1}{4}$ -in. iron pipe and fountain is complete ready to connect to the supply pipe, from the water system or from a tank or barrel. Diameter of pan, 13 in.; depth, 2 in.; total height, 10 in.

No. 472. Automatic Fountain, Complete....Each \$2.75

Moe's Trap Nest Front



A reliable automatic trap nest front, which can be easily fitted to an ordinary box or metal nest. Door is hinged at the bottom making it easy to clean the nest or remove the hen. Size, 11 in. wide by 12 in. high. Size of opening, 8 by 9 in. Effectively traps the hen and allows ample ventilation.

No. 63. Trap Nest Front,
Each \$0.50

Moe's Oat Sprouter

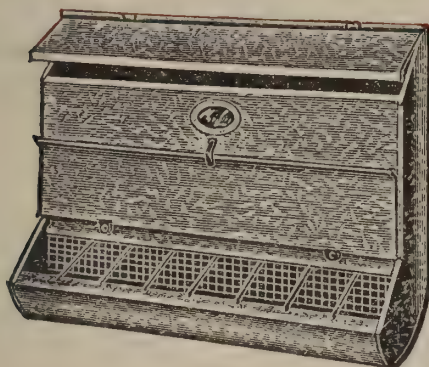
For use in a cellar or warm room. No lamp or heater required. Heavy galvanized steel frame, with galvanized steel pans, $15\frac{1}{2}$ -in. diameter. Pans are all perforated except the lower one which is solid to catch the water which seeps through the upper pans.

No. 450. With four pans....Each \$2.10

No. 451. With seven pans....Each 3.75



Moe's Dry Mash Hoppers



Made of heavy, tight coated, best quality galvanized steel. The curved bottom keeps the feed within easy reach of the birds, and the taper shape of the hopper—larger at the bottom—prevents the feed from clogging, and insures a gradual, automatic feed.

The wire grid and the wires running from the flange through the wire grid prevent the fowls from wasting the feed.

The sloping top prevents roosting on the hopper. When both covers are closed they are rat, mouse and weather proof. Height, 19 in.

No. 35.	Capacity, 10 quarts.....	Each	\$1.50
No. 36.	Capacity, 14 quarts.....	Each	1.70
No. 13.	Capacity, 22 quarts.....	Each	2.20
No. 37.	Capacity, 32 quarts.....	Each	2.60

Grit and Shell Boxes



Economical and practical for feeding grit, shells, etc. Heavy galvanized steel, thoroughly well made, no solder used in their construction.

No. 45.	Two-Compartment.....	Each	\$0.40
No. 9.	Three-Compartment.....	Each	.75
No. 90.	Four-Compartment.....	Each	1.00

Moe's Colored Leg Bands



Best quality. Fast colors. Made in six sizes and ten colors: White, Black, Dark Blue, Light Blue, Red, Pink, Garnet, Green, Yellow, Purple.



	No. 91	No. 92	No. 93	No. 94	No. 95	No. 96	No. 398
Kind.....	Asiatic	American	Medit.	Bantam	Pigeon	Chick	Turkey
Diameter...	$\frac{3}{4}$ in.	$\frac{9}{16}$ in.	$\frac{1}{2}$ in.	$\frac{3}{8}$ in.	$\frac{5}{16}$ in.	$\frac{1}{4}$ in.	$\frac{1}{8}$ in.
Price,							
50 Bands.	\$0.40	\$0.35	\$0.30	\$0.25	\$0.20	\$0.20	\$0.60

Moe's Aluminum Leg Bands



No. 130.	Aluminum, with extra large raised numbers. Easy to read, adjustable for any size fowl. Quickly applied.			
Package of.....	50	100	500	1000
Price.....	\$0.40	\$0.65	\$3.00	\$5.50

Moe's Poultry Punches



No. 38. A popular and practical Punch. Makes a clean perforation. Each . . \$0.15



No. 39. Moe's Ideal Punch. Works easily, cuts clean, and does not bruise the foot. Each \$0.35



Mark Your Baby Chicks

Roup-Over

Stops Roup, Canker, Colds, Overnight



Deadly roup starts like a cold, with running nose, etc. It spreads rapidly and often kills an entire flock. A few drops of Roup-Over usually banishes every symptom of roup or cold in one day. And, used as a preventive, it guards the whole flock against such epidemics. Roup-Over is unlike anything else, and far quicker in action.

3 Easy Effective Ways of Giving Roup-Over

Use it as individual treatment in the nostrils and cleft of the mouth; give it in the drinking water—or use on hot bricks as a medicated vapor. Roup-Over is now used and endorsed by leading poultrymen everywhere.

Trial (Guaranteed) Size	50c
3 Times the 50c Size	\$ 1
1/2 Gallon	\$8
1 Gallon	\$15



DON SUNG

**Makes Hens Lay
Lots of Eggs - All the Year Round**

Gets the Eggs When Eggs are Scarce. Keeps Hens Healthy.

This famous tonic GETS THE EGGS no matter how cold or wet the weather. Easily given in the feed, and beneficial to all poultry. Instead of feeding loafing hens all winter, you can now get big egg yields when eggs are scarce and high priced. Starts pullets laying early. Helps hens through the moult and starts them laying regularly. It must satisfy you, or we will refund your money.

TABLET FORM

50c Size (This is the Trial Guaranteed Size).
\$1 Size (3 times 50c Size)
\$5 Size (6 times \$1 Size)

POWDERED FORM

3 lbs.	\$5
10 lbs.	\$10
25 lbs.	\$20
50 lbs.	\$35

If your dealer cannot supply you with these remedies in the size you wish, send your order to Burrell-Dugger Co., Indianapolis, Indiana, who will ship promptly POSTAGE PREPAID.

Sold by Dealers Everywhere

All These Remedies Guaranteed By
BURRELL-DUGGER COMPANY
 Postal Station Bldg., Indianapolis, Ind.

WHAT TO DO FOR

**Lice, White Diarrhea, Worms,
Roup, Colds and Canker,
Hens That Wont Lay**

**T.S.F. Kills Poultry
LICE**

T.S.F.
TALCUMIZED SODIUM FLUORIDE

**ONE APPLICATION
Does the Work**

T. S. F. kills both old and young lice, including the lice that hatch from the eggs present at time of treatment. Easily given by pinch method, dip or dusting. Specially processed. Adheres to the plumage. Non-Irritating. One application lasts an entire season. Packed in special shaker-top cans with Government's directions for using.—35c Size (enough for 50 birds): Twice the 35c Size, 60c: Five times the 60c Size (Economy Size)—\$2.50.

AVICOL Stops Chicks
Dying

For White Diarrhea and Cholera — Blackhead in Turkeys

For White Diarrhea in Chicks

No longer need poultry raisers lose most of their chicks. All that is necessary is to drop an Avicol tablet in the drinking water. This positively prevents the diarrheas, chick cholera, bowel trouble, etc., to which all chicks are susceptible. It promptly stops the trouble, if already started. There's no other remedy like Avicol—nothing that does the work in the same prompt, positive way. Trial Size 50c; Large Size (almost 3 times 50c Size)—\$1; Economy Size (6 times the \$1 Size)—\$5.

Wormoids For Worms
in Poultry

The "Nicotine Sulphate" Treatment Recommended by Agricultural Colleges

Most flocks have worms. These parasites sap the vitality of the fowl, and interfere with laying. Symptoms are loss of flesh, paralysis, death. Wormoids (capsules) is an individual treatment that is prompt, sure, safe. Easily administered. Costs no more than flock treatments and is more sure and satisfactory. 50 Capsules, \$1; 150 Capsules, \$2; 500 Capsules, \$5.

**Use These Remedies
AT OUR RISK**

appears, which becomes whiter later on, and is very offensive. This sometimes causes Canker of the Vent if not given attention.

Treatment—Separate the sick birds from the flock and give dose of Epsom Salts, then inject Conkey's Balmo—formerly called Canker Special—in the Vent with a medicine dropper. The bird should be kept in an isolated coop until every evidence of the infection is gone. There is great danger that internal soreness may be overlooked. All male birds are likely to be infected. Do not let them mate with the young pullets nor allow the young cockerels to mate with the old hens. Sell the old males and use only the young cockerels.

CANKER OF THE VENT—May be caused by straining when laying, cuts, wounds, bruises, etc. It is easily contracted from a single hen in the breeding pen having a slight inflammation of the internal organs which, by giving off an unhealthy secretion, infects the male bird and is transmitted to the entire flock. In general appearance the sores resemble ordinary Canker and treatment with Conkey's Balmo and Salvo usually brings results.

GOUT—Gout is a disease similar to Rheumatism in many respects. It is largely due to errors in feeding, causing over-exertion of the liver and kidneys.

Symptoms—Bird becomes lame and moves with difficulty. Feathers are ruffled and the bird is listless, shows some fever and great thirst. Joints are swollen and soft; feet usually show much swelling, often bursting and discharging a bloody pus. Droppings have excess urate (chalky) matter.

Treatment—Change the diet. Reduce the animal protein and give plenty of green food. Keep the vent open by applying carbolated vaseline and wiping away any urate deposit that may accumulate. If the feet show inflammation coming to a head, dip a needle into Nox-i-cide, then pierce the skin and press out the pus; bind the foot with a good drawing poultice. Keep the bird cool and comfortable and continue on light, nourishing diet containing Conkey's Poultry Tonic. Give dose of Epsom Salts.

INFLAMMATION OF OIL GLAND—The Oil Gland located on the tail structure, supplies the bird with the oil for preening its feathers. This gland may become inflamed and swollen, the duct being closed. The bird is restless and picks at the feathers of the tail and the gland becomes infected and cankered.

Treatment—Use Conkey's Balmo—formerly called Canker Special—to anoint the gland, gently massaging until you can press the duct open. Wipe off the oil and use plain vaseline to grease the feathers slightly, so that the bird may find the means of dressing the feathers until the natural secretion of the gland gives relief.

RHEUMATISM—Rheumatism is occasioned by exposure to dampness, cold weather, poorly constructed houses, improper care and feeding, etc. It is indicated by stiffness of the joints, lameness and lack of energy.

Treatment—Provide dry, clean quarters, and don't over-feed. A large amount of green food should be given, with very little meat or animal food. Rub bird's shanks and thighs with Conkey's Balmo. Give each fowl twice a day one grain of Sodium Salicylate and two grains of Sodium Bicarbonate, dissolved in water.

FAVUS—A contagious disease caused by growth of a fungus known as "Arch-orion Schoneinii" fungus. It is easily acquired and may attack the most healthy fowl. This growth may develop in damp and ill-ventilated quarters, but it is usually communicated by introducing infected birds into the flock.

Have a Conkey Corner in Your Poultry House

Symptoms—Small white or gray spots on the comb, round or irregular, from size of a pinhead to that of a dime. They extend in size and increase in numbers until nearly all of the skin of the affected part is covered, and then form in a thin scale or crust on the surface of the skin.

This crust thickens as the disease advances and becomes cup-shaped in form; raised on the edges and depressed in the centers—and it will keep on until the deposit may be a quarter of an inch in thickness. Favus if allowed to spread is difficult to cure, and birds may die of debility. In handling cases of genuine Favus, considerable care should be taken. While the fungus or Favus will not attack the healthy human skin, a slight crack, cut, or abrasion may become infected and turn into an ugly sore. Better use rubber gloves when handling diseased birds.



Favus

Treatment—Is very unsatisfactory. In the early stages, applying a strong antiseptic ointment sometimes helps.

MOULD (Aspergillosis)—Poisoning caused by fowls inhaling, or otherwise taking into their systems, mould from mouldy food, or from mouldy hay, straw, vegetables, etc.

Symptoms—Lack of ambition, the fowl separates itself from the others, is sleepy and weak. Usually some catarrh with rattling in the throat, difficult breathing, and temperature above normal. Frequently a fungus growth on the membrane, forcing the mouth open, and somewhat resembling Canker.

Treatment—Practically no cure. Prevent by frequent spraying of premises with Conkey's Nox-i-cide. Kill and burn birds dying from the disease.

PROLAPSUS OF OVIDUCT—Confined mostly to heavy layers and due to over stimulating food, straining, especially when passing large eggs. May also be due to constipation. Usually a protrusion from the vent of a highly inflamed mass, which is liable to invite gangrene.

Treatment—Determine at once whether there is an egg in the passage. If so, treat as for Egg Bound. If it is not due to this trouble, then bathe parts in warm water and when dry apply vaseline. Feed lightly. Give plenty of green stuff.

EGG BOUND—Usually due to an overfat condition.

Treatment—Inject sweet oil in the vent and then by gentle pressure, assist passage. If this does not bring desired results inject oil as before and insert an oiled finger, breaking egg and removing shell. Reduce feed and give green food, withholding fat-producing foods.

FROSTED COMB—There is no remedy if comb is allowed to thaw and become black.

Treatment—Apply snow or ice water until frost has been extracted. Then anoint with Conkey's Balmo—formerly called Canker Special—kneading comb gently once a day. Keep bird where temperature is above freezing. If water blisters form, lance and continue to apply Balmo.

EGG AND FEATHER EATING—These troubles are usually due to improperly balanced rations, close confinement and inquisitiveness of individual birds. Flocks infested with worms will also sometimes eat feathers. Hens fed on Conkey's Gecco Egg Mash are not likely to acquire these habits. Keep plenty of Oyster Shell handy. Dark nests help prevent Egg Eating.

Have a Conkey Corner in Your Poultry House

ODOROUS, FREAK, BLOODY EGGS—Onions, fish, garlic and other such foods if fed in excess may cause eggs to smell. Large or double yolk eggs, thimble size eggs, eggs without shells, eggs with blood clots, etc., are usually due to derangements caused by improper feeding, run down condition, or lack of shell material.

Treatment—Feed your hens regularly a balanced ration like Conkey's Gecco Egg Mash and Conkey Scratch Grains. Keep them toned up with Conkey's Poultry Tonic and you will not experience many of these abnormal conditions.

SOFT SHELL EGGS—Due to hens failing to digest enough shell making material or to derangement of the lime-secreting organs. Keep a good supply of Oyster Shell and Grit before hens. Feed Conkey's Y-O in the mash. It makes strong shells because it supplies the necessary vitamin D to cause assimilation of the lime which is in the food and grit.

CONSTIPATION—Caused by lack of exercise, improper feeding, disease or by worms; and in the case of chicks, by obstruction of the vent. Often chicks are given too much corn meal and other heavy food and not enough green food and bulky material. Enlarge the runs, give an increased amount of bran in the mash. Conkey fed chicks rarely become constipated. Give Epsom Salts—one pound salts to two gallons of water.

Examine the vent; if obstructed, use carbolated vaseline to soften deposit.

CHICK DISEASES

WHITE DIARRHEA—Little chicks are particularly susceptible to digestive ailments. Improper incubation or brooding, and mistakes in feeding and general handling frequently bring on such troubles. The symptoms are frequently similar to those of Bacillary White Diarrhea, although the White Diarrhea germ is not present. Though the causes are widely different, the same treatment that is indicated for White Diarrhea is advisable in all such cases.

Symptoms—Chicks huddle together and remain under the hover or the hen. They are listless and stand or sit with eyes closed. Wings droop or hang limply from the body, and the chick may chirp almost continually. Droppings become white and creamy or gluey or may be mixed with brownish material. The excrement adheres to the down about the vent until the opening is completely closed and death results unless soon relieved.

Treatment and Preventive Measures—The incubator, in all its parts, should be thoroughly disinfected with Nox-i-cide before use. Have the brooder or, in case of a mother hen, have the coop and all utensils thoroughly cleaned and disinfected. Darken windows of brooder the first few days to prevent chicks picking up foreign matter (read again page 22). Remove droppings frequently, lest chicks pick up the discharged matter.

As a precautionary measure or in the actual treatment of the disease, Conkey's Diatex Tablets—formerly called White Diarrhea Tablets—should be constantly kept in the drinking water. Keep chicks warm and dry. Guard against over-heating or chilling.

Follow feeding directions given on page 24, and be sure to provide plenty of hopper space. Lack of hopper space forces chicks to feed irregularly and then there is trouble.

BACILLARY WHITE DIARRHEA—This is the real White Diarrhea for which science has not yet found a sure cure. The infection is in the ovaries of the mother hen.



White Diarrhea or
Bowel Trouble

Symptoms—Same as in White Diarrhea; usually attacks chicks from third day to third week.

COCCIDIOSIS—Coccidiosis is a disease of young and growing chicks and is likely to occur between ages of three or four to twelve weeks of age. It is caused by a microscopic living organism, which infests the caeca, large intestines, and in later stages the liver.

Prevention is better than cure and Coccidiosis can be prevented by absolute sanitation—especially keeping the droppings cleaned up—and by care of the feed and water utensils. The use of sour milk or buttermilk from the start is important, because the lactic acid content of soured milk will prevent the *Coccidia* from developing. This is one reason that Conkey's (the original) Buttermilk Starting Feed with Y-O is so popular among raisers of baby chicks. The fact that it is perfectly balanced and carries an abundance of vitamins means that the chicks have a fair chance to escape digestive troubles. The buttermilk content provides lactic acid, which helps to prevent and retard the development of Coccidiosis and White Diarrhea. Being low in fiber, there is less strain on the caeca. This is of the utmost importance with all baby birds. It is in the caeca that fiber is likely to cause trouble, and any inflammation or strain on this portion of the digestive tract would, of course, increase the susceptibility to Coccidiosis, which is especially a disease of the caeca.

Symptoms—Feathers become ruffled and soiled. Skin of head and visible mucous membrane show marked paleness. Chicks stand humped up and sleepy, and usually, though not always, they have diarrhea which is sometimes bloody. Post-mortem examination will likely show the caecum clogged with hard, cheesy matter interspersed with blood, and the intestines inflamed.

Treatment—Thoroughly clean chick houses every morning. Remove all chaff and droppings from the floor and do it thoroughly. Be absolutely certain that the drinking fountains are disinfected every morning and that they are set in a different place on the floor each day. This is necessary as the disease multiplies rapidly in the presence of moisture and by moving the fountains each day the moisture that gets on the floor is not allowed to continue in one place.

As quickly as you can switch the birds over—about three days—put them entirely on sour milk instead of water, as the lactic influence of sour milk has a very beneficial effect on the system of the chick and helps materially in checking the disease. Do not overlook this factor, as it is your strongest, or at least one of your strongest, forces for fighting this disease.

Introducing a very large quantity of buttermilk into the diet makes it necessary to reduce the mash consumption at least half to two-thirds, making the grain ration predominate. Otherwise there will be digestive trouble, due to excessive animal food.

As it takes only seven days for the microscopic *Coccidia* to be passed out of the chick's body again, after having entered it—the last time in the form of an oocyst—the disease spreads very rapidly through the entire brood. Strict sanitation, and changing of ground, along with the above suggestions, will enable you to stamp this trouble out of the flock; but it will probably take ten days to notice any particular change and during this time your loss will quite likely be heavy. After the disease has been brought under control you can again revert to equal parts of mash and grain and discontinue the use of buttermilk instead of water.

GAPES—Gapes are due to the presence of small worms which attach themselves to the inside of the windpipe and obstruct the breathing. The parasite can be taken into the body through contaminated drinking water, or by eating earth worms infected with the parasite's eggs, or by picking up the gape worms thrown off by some other chicks. Chicks are most susceptible between the ages of three to eight weeks.

Have a Conkey Corner in Your Poultry House

Symptoms—Presence of gape worms in the windpipe makes breathing hard. When the worms grow in size they cause the chick to gape with every breath. By sucking the blood, and by obstructing the breathing passage, the worms cause the chick to weaken and die unless quick relief is given.

Treatment—Remove the brood to new ground daily until all evidence of the presence of gape worms is gone; feed only on boards; do not allow chicks to wade through the wet grass in the early morning.

RICKETS (Commonly called "Leg Weakness")—The chief cause of leg weakness in chicks and growing stock comes from a lack in the food of vitamin D, and sometimes minerals. The absence of vitamins A and B from the food is also responsible in an indirect way for a part of this trouble, as these two vitamins assist the digestive organs to more completely dissolve and make available the mineral elements which are a part of all foods. Too much heat in the brooder, metallic poisoning, unbalanced feed, and too close confinement, are also causes of "Leg Weakness."



Leg Weakness

Treatment—Be sure the birds have an abundant supply of vitamins A, B and D at all times. Yeast and cod liver oil is the surest way to supply these vitamins and Conkey's Y-O (yeast with cod liver oil) combines vitamins A, B and D in a dependable and potent form. If the disease has reached an advanced stage separate the weak chicks and let them eat as much pure Y-O as they desire or mix 10 per cent of Y-O in their mash. This will effect a cure though it may take ten days or so to notice much change. Occasionally, some birds are so constituted that they will not respond.

Prevention is best and 2 per cent of Conkey's Y-O in the mash right from the start will prevent leg weakness under almost any condition. See pages 23 and 26 on Y-O.

GREEN STUFF FOR CHICKS—Since many cases of leg weakness are traceable to improper feed and lack of green stuff and vitamins, we strongly urge the use of Conkey's Buttermilk Starting Feed with Y-O for the first six weeks. This is a properly balanced food, containing the proper amount of mineral matter, vitamins, etc., which are necessary for the best development of the chick.

CANNIBALISM IN CHICKS—The picking at toes and feathers which sometimes gets so bad that chicks are partly eaten alive, is a condition that may be due to any of several causes. It may begin in the incubator chamber, merely by accident when one of the chicks gets a good hold of the toe of another chick and starts blood. Among older chicks toe-picking is usually due to overcrowded conditions or a deficient ration.

Treatment—Remove all picked chicks and keep them isolated until wounds are healed, using Conkey's Salvo remedy. See that a good supply of clean litter is kept on the floor as this helps to conceal the chicks' toes. Among older chicks get them out of crowded quarters and on to the ground in the open as soon as possible even if you have to shovel the snow away from around the brooder house. Getting outside will give them needed exercise and new interests to "take their minds off" toe-picking. Removing afflicted chicks will usually break up the trouble. Darkening the brooder house will also help in checking a recurrence. Feed liberally of green stuff. It is also recommended to give the flock meat scraps, but if you are feeding Conkey's Buttermilk Starting Feed with Y-O consider the matter carefully before doing this. Conkey's is a balanced ration which supplies everything the chicks need. Cannibalism is extremely rare among Conkey-fed chicks, and when it does occur it is usually due to over-crowding rather than a deficiency of diet.

Have a Conkey Corner in Your Poultry House

PARASITES AND HOW TO CONTROL THEM

HEAD LICE—This louse ranks with White Diarrhea as one of the main causes of loss in baby chicks. Head lice are found on the head and sometimes on the neck and under the wing.

Treatment—Apply Conkey's Head Lice Ointment on the baby chick as directed on package. As a preventive measure, always dust the hen with Conkey's Lice Powder before setting her. Dust her in the morning and at night. After she has thrown off the powder, apply the Ointment to her head. Repeat dusting and use of Ointment on the 7th and 15th days. On the third day after hatching, treat chicks with a light application of Head Lice Ointment. Inspect chicks regularly every week.

LICE—The body louse is so called because it lives on the scurf of the skin. Thorough treatment for body lice will include all feather lice.

Conkey's Lice Powder which contains sodium fluoride is a very effective treatment, and is used by simply holding the bird by the legs and shaking the powder into the feathers, after which the bird is righted and the powder worked well in with the hands. Sodium fluoride is endorsed by the Government as a louse exterminator. But sodium fluoride is a caustic and when used by itself is irritating. In Conkey's Lice Powder this wonderful lice exterminating agent has been incorporated in just the right proportion with other ingredients; effective results are obtained without injury to eyes or throat. Examine the birds ten days after applying Conkey's Lice Powder and if lice are found give another application.

MITES—are also called Red Bugs, Chiggers or Jiggers. They pierce the skin, suck the blood and cause intense irritation with their claws.

Treatment—Clean up infested premises; take out the litter and burn it. Remove the roosts, nests, and all other fittings and paint them with full strength Mite Liquid. Then thoroughly spray or paint every part of the house with full strength Conkey's Mite Liquid. Do this early in the day so the house will be thoroughly dry at roosting time. Before putting back roost poles, wipe off any excess liquid which might irritate the bird's feet. Repeat treatment in ten days and then as often as seems necessary.

STICK TIGHTS or HEN FLEAS—are common in southern states. They attack domestic animals as well as fowls. Rats and mice are carriers. The flea attaches itself to the comb and wattles, burying its head in the flesh. It covers the face so solidly that the eyes are closed and the bird dies from loss of blood, combined with lack of food and water. This pest is especially deadly to little chicks. Stick Tights hatch in warm, dry ground where eggs are deposited by the female.

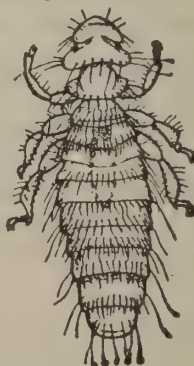
Treatment—Apply Conkey's Flea Salve to head, face and wattles according to directions. Keep the ground free from constantly hatching fleas by sprinkling with full strength Conkey's Nox-i-cide and then wet the ground thoroughly with the hose, using a strong pressure nozzle so the ground is fairly plowed by the water, or saturate the ground two or three times a week with a solution of one pint of Conkey's Nox-i-cide to a pail of water.



Head Louse



Eggs of Head Lice



Body Louse



Body Lice Eggs

SCALY LEG—Is caused by the scaly leg mite working between the scales of the leg so that the scales are pushed up by a crustaceous substance.

Treatment—Scrub the legs with soap and water to soften the scales, then dry and apply Conkey's Scaly Leg Remedy as directed on carton.

POULTRY TICK—(Blue Bug) This parasite is spreading with alarming rapidity in the southwestern states and Florida.

The Poultry Tick looks much like a bedbug or wood tick. In the seed-tick stage it is often called the "owl" tick. The Poultry Tick feeds at night and hides in cracks and crevices by day.

Treatment—No method of killing seed ticks embedded in the skin has yet been discovered. As the tick, after engorging with blood, drops off the bird and returns to a hiding place, it is advisable to attack this problem by cleaning the premises. Clean up and disinfect thoroughly, getting into all the cracks.

WORMS

INTESTINAL WORMS are becoming so prevalent that no flock in the country is considered entirely free.

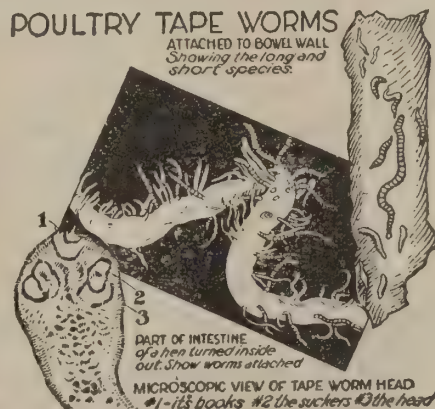
TAPE WORMS—are peculiar in that they must develop in the body of an insect or earthworm. The eggs are voided in the droppings and being eaten by flies, snails, earthworms, bugs, etc., are hatched within the bodies of these hosts. At this stage the larval worm is a minute cell, containing the head of the worm. Chickens eat the hosts and so swallow the larval tape worm which develops and the head of the worm attaches itself to the lining of the intestine, being provided with numerous tiny hooks and suckers by which it maintains a fast hold. A neck develops and segments form.

ROUND WORMS—are different. They are spread through contaminated soil and are picked up by the birds. The worms are of both sexes; the eggs are passed out in the droppings.

CAECAL WORMS — These are small, almost thread-like worms, not over half an inch long. They live in the extreme end of the blind gut. The eggs pass out onto the soil and are picked up by the fowl.

Symptoms—Ruffled feathers, unthriftiness, pale dry combs and wattles, diarrhea and lameness. Although always hungry, the bird is underweight. The droppings are usually watery and yellowish and may be frothy.

Treatment—Use Conkey's Poultry Worm Remedy according to directions on the package, for the large round worms. For Tape Worms use kamala, giving in 15 grain doses—get your druggist to fill capsules.



Have a Conkey Corner in Your Poultry House

SANITATION

WITHOUT thorough sanitation it is useless to expect success. Conkey's Nox-i-cide is a highly concentrated poultry disinfectant and stock dip that can be used for all disinfecting purposes. It blends readily with water for spraying. It can be used with crude oil or alone for extreme cases of disinfecting as in the case of poultry ticks or severe infestation.

WRITE FOR FREE ADVICE

For more than a quarter of a century Conkey has stood high in the poultry world because of his ability and willingness to help in time of need. When disease epidemics break out, refer at once to Conkey for advice. During all the years, Conkey has never once charged for consultation on poultry matters. We cordially invite you to write fully and as often as you like. Address:

Consultation Department, The G. E. Conkey Co.
6529 Broadway, Cleveland, Ohio, U. S. A.

THE FAMOUS CONKEY GUARANTEE ON ANY REMEDY

No Conkey laboratory product is ever introduced until it has been thoroughly tested, but you are not asked to try Conkey remedies on faith alone.

GUARANTEED

Conkey guarantees that your money will be cheerfully returned if you are not satisfied.

All Conkey dealers are authorized to refund your money when you ask for it, but if you should have any difficulty, please write to Conkey.

Conkey Mail Order Service for Emergency Cases

There is a dealer handling Conkey remedies in nearly every town. Conkey sells through dealers only, because this assures the wide distribution and readiness to serve which is essential.

However, if you don't know or cannot find a Conkey dealer, send your name, address and shipping instructions, together with the postpaid prices as shown in this book. Address letter as follows:

THE G. E. CONKEY CO.
6529 Broadway, Cleveland, Ohio

Have a Conkey Corner in Your Poultry House

Conkey's Poultry Remedies

Known All Over the World—The Poultryman's Standby. Keep a Few Select Remedies Always at Hand Ready for Emergency.

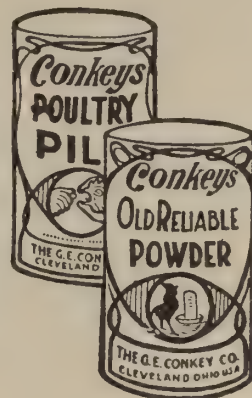
CONKEY'S OLD RELIABLE POWDER

(Formerly Conkey's Roup Remedy)

This famous treatment has been on the market for thirty years, known to poultrymen everywhere as Conkey's Roup Remedy. Many would not try to keep poultry without Conkey's—the Old Reliable. Easily given in the drinking water letting the birds help themselves. Keep it on hand for use in emergency or put it in drinking fountains on cold rainy days or when there is a sudden change in weather. In mild doses it acts as a tonic. See Roup—page 47.

EASTERN PRICES—Pkgs., 25c., 50c., \$1.00; 1½ lb. can, \$2.35, all postpaid; 5 lb. can, \$5.50; \$5.75 postpaid.

COLORADO AND WEST—Pkgs., 30c., 60c., \$1.20; 1½ lb. can, \$2.50, all postpaid; 5 lb. can, \$5.75, \$6.00 postpaid.



CONKEY'S POULTRY PILLS

(Formerly called Conkey's Roup Pills)

Administer these pills twice daily, in extreme cases three times a day. See Roup—page 47.

EASTERN PRICES—Pkgs., 25c., 50c., \$1.00 (all postpaid) breeder size (1,000 Pills) \$2.75; \$3.00 postpaid.

COLORADO AND WEST—Pkgs., 30c., 60c., \$1.20; all postpaid; breeder size (1,000 Pills) \$3.00; \$3.25 postpaid.

CONKEY'S BALMO

(Formerly called Conkey's Canker Special)

A soothing cooling application for relieving irritation around the swollen eyes and head and in the mouth when treating conditions caused by colds and similar troubles. See pages 47 and 48.

EASTERN PRICES: Package 50c, pint \$1.20, quart \$2.00, gallon \$7.00.

COLORADO AND WEST: Package 60c, pint \$1.55, quart \$2.50, gallon \$8.00.

Small size prepaid, other sizes express collect.

CONKEY'S SALVO

(Formerly called Sorehead Remedy)

Good to have on hand for treating sores, cuts and wounds of any description. See pages 51 and 53.

PRICES—Pkgs., 25c., 50c.; or 30c, 55c. postpaid; breeder size (1 lb. salve, 5 lbs. powder), \$3.50; \$3.65 postpaid; 10 lbs. powder only, \$3.50 postpaid.

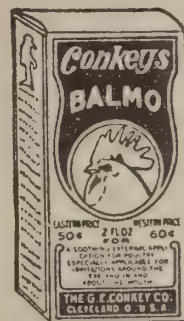
CONKEY'S DIATEX

(Formerly called Conkey's White Diarrhea Remedy)

These tablets have been on the market for years as Conkey's White Diarrhea Remedy. Once you have used this old reliable preparation you will never be without it. An astringent tablet for drinking water of poultry and baby chicks. Play safe—keep this remedy in the drinking water of all baby chicks until danger period of the first few weeks is past. See page 55.

EASTERN PRICES—Pkgs., 25c., 50c., \$1.00, all postpaid; breeder size, (1,200 Tablets), \$3.75; \$3.85 postpaid.

COLORADO AND WEST—Pkgs., 30c., 60c., \$1.20, all postpaid; breeder size (1,200 Tablets), \$4.00; \$4.10 postpaid.



CONKEY'S POULTRY WORM REMEDY

(For Large Round Worms)

Over 90 per cent of market poultry are infested with worms, of which there are many varieties—Round Worms, Gizzard and Caecal Worms and Flukes or Leaf Worms. Worms cause great loss and flocks should be treated regularly. See directions on packages of Conkey's Worm Remedy. See page 59. **PRICES**—Pkgs., 25c., 50c.; or 30c., 55c. postpaid; breeder size (5 lbs.), \$2.75; \$2.85 postpaid.



CONKEY'S SCALY LEG REMEDY

An excellent application for removing this unsightly condition.
PRICES—Pkgs., 25c.; or 30c. postpaid.



CONKEY'S LICE POWDER (Contains Sodium Fluoride)

For dusting hens, nests, growing chicks and for use wherever body lice must be overcome. **PRICES**—Pkgs., 35c., 75c.; pails, 12 lb., \$2.60; 25 lb., \$5.00. Parcel post, express or freight extra.



CONKEY'S MITE LIQUID

For painting roosts, fittings, the inside of house, nest boxes, etc. **PRICES**—Cans, qt., 60c.; 2. qt., 90c.; gallon, \$1.50; 5 gal., \$7.00. Parcel post, express or freight extra.

CONKEY'S HEAD LICE OINTMENT

For overcoming and preventing the murderous head louse which causes loss of so many hen-hatched chicks. **PRICES**—Pkgs., 10c., 25c.; or 15c. 30c. postpaid.

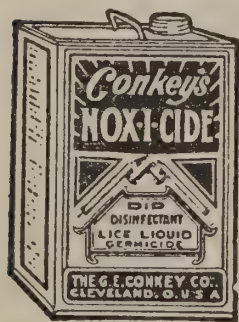
CONKEY'S NOX-I-CIDE (Dip and Disinfectant)

Every poultry yard, ranch, home, factory, stable, store/ office building—in fact, every place where sanitation is necessary to health—needs Conkey's Nox-i-cide, every day in the year

For poultrymen, Nox-i-cide is indispensable as a red mite destroyer—paint it on the roosts and spray it into cracks. Spray premises daily when disease is present and once a week as a preventive of red mites, ticks, "blue-bugs" and disease epidemics

EASTERN PRICES—Cans, pt. 50c; qt. 80c.; 2 qts. \$1.30; 1 gal. \$2.00; 5 gal. \$9.25; 10 gal. \$17.75. Parcel post, express or freight charges extra.

COLORADO AND WEST—Cans, pt. 60c; qt. 90c.; 2 qts. \$1.50; 1 gal. \$2.25; 5 gal. \$10.50; 10 Gal. \$19.00. Parcel post, express or freight charges extra.



CONKEY'S FLY KNOCKER

Dairymen, drivers, horsemen, stock raisers, cattlemen, sheep raisers declare this remedy the best investment they make—animals free from insects do better in milk and butter production while growing stock unquestionably fattens faster when relieved from biting, stinging, disease-spreading insects.

EASTERN PRICES—Cans, qt. 60c; 2 qt. 90c; gal. \$1.50; 5 gal. \$7.25; 10 gal. \$14.00. Parcel post, express or freight charges extra.

COLORADO AND WEST—Cans, qt. 80c; 2 qt. \$1.35; gal. \$2.00; 5 gal. \$9.00; 10 gal. \$17.00. Parcel post, express or freight charges extra.

CONKEY'S STOCK TONIC

A general conditioner of real merit for live stock.

EASTERN PRICES—Packages, 25c, 50c, \$1.00; pails, 12 lbs. \$2.10; 25 lbs. \$3.45; bags, 50 lbs. \$5.25; 100 lbs. \$10.00. Parcel post, express or freight charges extra.

COLORADO AND WEST—Packages, 30c, 60c, \$1.20; pails, 12 lbs. \$2.75; 25 lbs. \$4.50; bags, 50 lbs. \$7.25; 100 lbs. \$13.00. Parcel post, express or freight charges extra.

CONKEY'S POULTRY TONIC

Every bird from chick to maturity will be more productive, healthier and more profitable if given a good tonic and regulator. Conkey's Poultry Tonic helps birds get more out of their feed. They produce more eggs and better flesh on LESS FEED, by better digestion and assimilation. Conkey's Tonic is all medicine—free from filler, red pepper and "hot stuff." Keeps the young chicks growing, makes molting easy, strengthens the bird for bad weather and generally maintains a high health average.

EASTERN PRICES—Packages, 1½ lbs. 25c.; 3¼ lbs., 50c.; 7 lbs. \$1.00; pails, 12 lbs. \$1.60; 25 lbs. \$3.00; bags, 50 lbs. \$5.00; 100 lbs. \$9.50. Parcel post, express or freight charges extra.

COLORADO AND WEST—Packages, 1½ lbs. 30c; 3¼ lbs. 60c.; 7 lbs. \$1.20; pails, 12 lbs. \$2.25; 25 lbs. \$3.75; bags, 50 lbs. \$7.00; 100 lbs. \$13.00. Parcel post, express or freight charges extra.



CONKEY'S Y-O—COD LIVER OIL— AND SUNLIGHT



ONLY a few years ago authorities were endeavoring to promote life and growth with foods that were synthetically pure as to proteins, carbohydrates, fats and minerals. Always they failed! Then, vitamins were discovered and since that time—about 15 years ago—vitamins have more and more proven their vitalizing power.

It is now definitely known that the lack of vitamins brings about many ailments in all forms of animal and bird life, especially in the young. They must have these vitamins and since vitamins A and D are found in large quantities in cod

liver oil and vitamin B is found to be very strong in yeast, Conkey has taken these two products and, by a secret process, sealed and combined them in such manner that the A and D vitamins of the oil do not lose their potency.

Putting this amazing discovery into practical use through the manufacture of Conkey's Y-O is a boon to poultrymen as is illustrated by the thousands of satisfied customers.

Conkey's Y-O is a chocolate brown powder, which can be easily and readily mixed with any dry mash. It has the savory odor of clean, sweet, freshly-refined cod liver oil and is unusually tasty and palatable to poultry. Hence fowls eat it greedily, as do all birds and animals.

PRICES—Eastern: 1 lb. package 55c; 2 lb. package \$1.00; 5 lb. package \$2.00; 25 lb. drum \$7.50; 50 lb. drum \$14.00; 100 lb. drum \$22.50.

COLORADO AND WESTERN—1 lb. package 60c; 2 lb. package \$1.10; 5 lb. package \$2.25; 25 lb. drum \$9.00; 50 lb. drum \$16.00; 100 lb. drum \$27.50.

ADVANTAGES IN USING Y-O FOR POULTRY IMPROVES EGG PRODUCTION

It increases size of eggs, strength of shell and number laid. Poultrymen have long been baffled by shrinkage of size of eggs and decrease in the quality of shells of eggs laid by their flock as production increases. Even though the ration contains all the raw material, the digestive organs of the hen cannot make soluble a sufficient quantity rapidly enough to meet the increasing rapidity of the lay. After the reserve energy stored in the body of the hens becomes exhausted, the eggs become smaller, the shells thinner and the vitality of the birds is reduced to the breaking point. Y-O helps to solve this problem.

INCREASES FERTILITY

Mysterious life giving forces—vitamins A, B and D—imparted from the sun's radiant energy, are found stored most abundantly in the cells of the yeast plant and the liver of the cod, where we can draw upon them when Old Sol is either absent or indifferent to our needs. By simply adding 2 lbs. of Y-O to 100 lbs. of mash fed you can insure maximum fertility from breeding pens.

STOPS LOW HATCHES

Feeding yeast with cod liver oil in order to furnish better eggs for hatching is rapidly becoming the practice of all big hatcheries, since the advent of Conkey's Y-O. It is so simple to mix this powdered form of yeast with cod liver oil with the mash and so much surer in results because it keeps potent.

PREVENTS RICKETS ("Leg Weakness")

One of the greatest values of Conkey's Y-O is the help it gives in raising baby chicks. It is a protective food, containing the anti-rickets vitamins which are absolutely necessary to prevent leg weakness and slow bone growth.

See page 26 on vitamins. Also inside front and back covers.

FUR-BEARING ANIMALS ALL BENEFIT BY Y-O

The fact that many poultry raisers are also interested in rabbit raising, fox farming, etc., has led to new interest in Conkey's Y-O for use with other animals.

Y-O FOR RABBITS—Experiments of breeders indicate that Conkey's Y-O will fill a great need in rabbit raising in three important respects—improving the fur, the meat carcass and prolonging the vitality of breeders. While much remains to be done in both practical and scientific experiment, the benefit of Y-O is certain, corresponding to the results secured with poultry. Rabbits may be bred from 7 months to 4 years old, if young does are mated to old bucks and vice versa. The doe carries her young 31 days and it requires 60 days to raise and wean the young, which should be marketed at 8 weeks as fryers except where wanted for breeding purposes. It is usual to breed four times a year but possible to breed oftener if the does are not kept longer than one year. It is probable that the use of Conkey's Y-O to restore vitamins would overcome this drain on vitality and thus prolong the usefulness of fine specimens for breeding. But we strongly urge use of Conkey's Y-O for rabbit breeders and commercial rabbitries to improve quality and quantity of their output. Write for circulars on Y-O for rabbits, and Conkey's Rabbit Ration with Y-O.



FOXES—Like all livestock under artificial conditions, must be fed scientifically to insure a fully balanced ration, the approximate formula being Protein 20% (or more), Carbohydrates 65%, fat 10% and Mineral salts 5%. After the summer shedding of coat the fall feeding should be more generous to develop the new coat and prepare the animal for breeding season. Cod liver oil is almost universally used in fox feeding. Both the fat of the oil and the vitamins in cod liver oil help produce remarkable results in pelt improvement. With proper feeding the pelt should be clear, bright and sparkling by November, with dense under fur and fine, wavy guard hairs, instead of coarse, straight and flat. Because of the very short season when pelts are prime (November to January) every advantage must be taken of all the help available.

Conkey's Y-O combines the virtues of high test cod liver oil, rich in A and D vitamins, with concentrated Marmite or brewers' yeast, which is rich in B vitamins. In feeding foxes the B vitamin is very important.

Y-O can be sprinkled on the regular food in a cleanly economical manner. Adult foxes will make better gains on their regular food ration when Conkey's Y-O is added—3 to 5 ½%—and their health and condition will improve because of the protective vitamins. (Yeast furnishes Vitamin B, cod liver oil furnishes vitamins A and D.) The Y-O powder can be combined with any part of the ration, fat meat, fox biscuit, milk, mush, etc. It is equally beneficial summer or winter. In summer it will greatly improve the development of fox cubs and stimulate better growth of fur. If used in the Spring and through the nursing period it will not only give the pups a better start but help the mother fox. Used with breeders it undoubtedly will improve the quality of the young and in many cases increase the litter. In short—in the fewest possible words, Y-O assists Nature to accomplish her object in reproducing and maintaining good specimens of the species.

Y-O FOR DOGS, CATS, ETC.—Y-O is a protective vitamin food strongly recommended for use with all animals to improve health, condition and favorably affect breeding. The benefit from using Y-O is quickly noticeable in the improved feel and appearance of the coat. Y-O is easy to handle, as the dry powder form is convenient and the patented process of sealing the oil to prevent oxidation, insures good keeping qualities.

Easy to mix with any Mash

HAROLD TOMPKINS, Concord, Mass., President of the Rhode Island Red Club of America, and Red breeder of world renown, wrote regarding Conkey's Y-O:—

"Would never again try to raise a flock of chicks without this valuable product of yours, for it is so easy to use and eliminates the handling of the raw oil of which the contents may or may not be what is recommended." Others write similar letters:

Last year I ran an experiment on 500 White Wyandotte baby chicks. In their first feed, and all feeds fed up to 16 weeks of age, I used Y-O according to directions. These birds were raised as an experiment on the second floor of a 20 x 24 house. Being rather skeptical of the merits of your Y-O, I naturally gave it a very severe test. I was very highly pleased and amazed to find at the end of eight weeks that my mortality did not exceed 8%, and that I did not have at any time a single chick off its feet, down from leg weakness. The average weight of my chicks at this period was approximately 2 lbs. each.

TRAIN'S POULTRY FARM HATCHERY, INC.,
R. L. Train, Independence, Mo.

Regarding our tests of your Y-O. From 2000 winter hatched chicks raised entirely indoors, 17 stubborn cases of leg weakness developed. We had tried a number of the best feeds to overcome the trouble but without success for the 17. When the Y-O arrived we put these chicks in an ordinary chicken crate and fed Y-O liberally. Improvement immediately appeared and in a short time 16 were absolutely cured; only one did not improve. This decidedly proved to us that Y-O did its stuff. We shall want more Y-O next year.

THE PACKARD POULTRY FARM,
Route 1, Box 106-A, So. Tacoma, Wash.

Please send us at your earliest convenience a 25-pound drum of your Y-O. We find that nothing else will take the place of this product and it is our intention to use it the year round.

J. C. FISHEL & SON,

By Carl J. Carter,
Columbus, Indiana

*Many users
write letters like
these.*

*Try Y-O and
you will be
pleased.*

From 170 pullets hatched in April, I received in January 2802 eggs in 31 days, or 53% production. Bird No. 8 laid a total of 27 eggs. Twenty other pullets laid 24 eggs each in 31 days. Good stock, proper feeding and Y-O work hand in hand for increased egg production, and besides, Y-O also keeps them in A-1 condition and happy.

MERRYCHICK FARM,
Joe Mangold, Delhi, New York

Your Y-O is wonderful. I shall not try to raise chicks without it hereafter. I have the best lot of pullets that I have ever raised and as nice a lot as one can find anywhere. They began laying when 4 months and 10 days old, not just one pullet laid an egg, but the flock started laying when from 4 months 10 days to 4 months 20 days old and have kept it up nicely.

R. E. SANDY,
805 Baltic Ave., Atlantic City, N. J.

Some time ago we sent for a trial package of Y-O sufficient to feed 75 hens for 30 days. We are pleased to report that our results have been quite satisfactory. We have been getting a larger percentage of both eggs and fertility than for many years and we believe Y-O has much to do with it. We are enclosing a check for another 5-pound package to feed our baby chicks.

E. R. & JENNIE G. HEADLEY,
Moscow, Idaho



We are using Y-O in the mash for all of our breeding stock, and in all my years of running an incubator I have never received the percentage of hatch I am receiving now, altogether beyond my expectations. I give Conkey's Y-O absolute credit for the increase. We will use at least a ton of Conkey's Y-O next year.

**DOUGLAS COUNTY
HATCHERY,
INC.**

H. J. Kramer,
Alexandria, Minn.



REILS SEED COMPANY

143 Barnard St.

SAVANNAH, GA.

Conkey's POULTRY
BOOK